

# WKO4 User Guide

Version 2 | April 2015



*The User Manual contains all essential information for the user to make full use of WKO4. The Manual is divided into several sections, mainly accessible through the Table of Contents. Each section represents a group of functions or tasks and their details explanation.*

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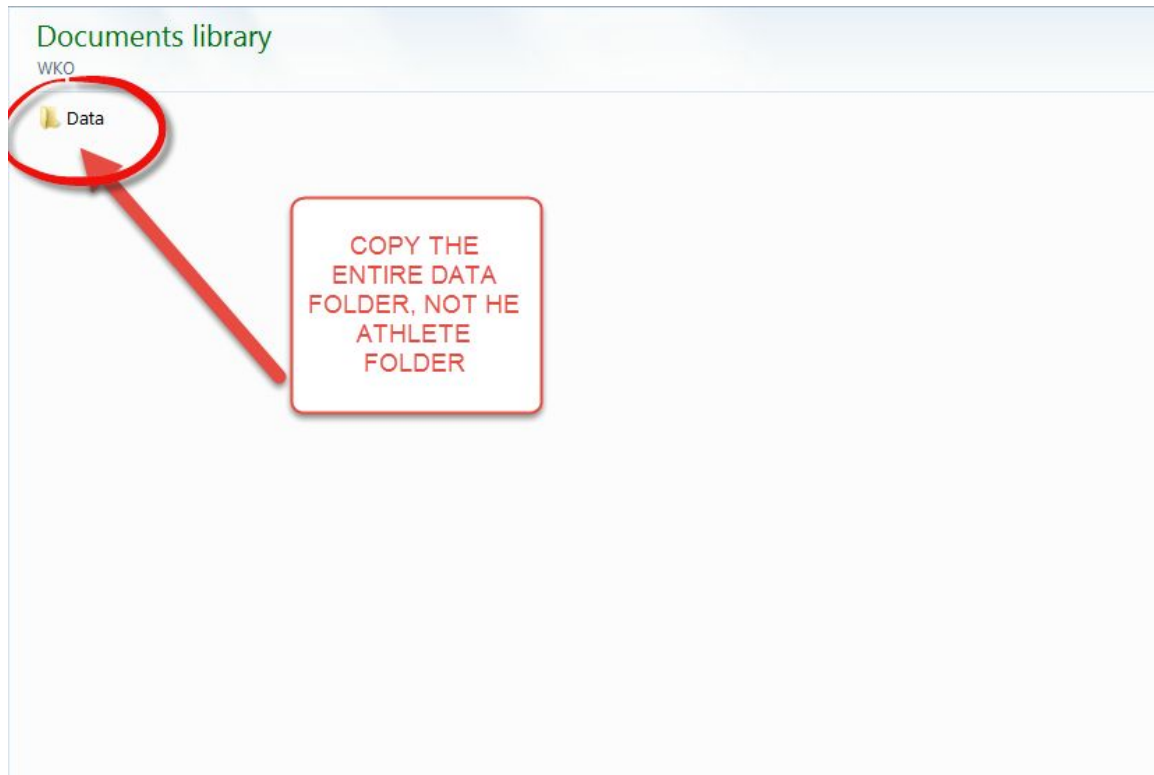
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# Initial Install and Sync

## Copying the WKO+ 3.0 Data Folder from Parallels (Windows) to Mac

To complete the upgrade of WKO4 on Mac, you will need to copy your WKO+ 3.0 data files and store them on your MAC desktop:

1. Open Windows for Mac
2. Navigate to your WKO+ 3.0 Data File
  - a. Documents>TrainingPeaks>WKO>DATA
3. COPY the DATA file to memory stick or any storage device or system. DO NOT DELETE
4. Please ensure you copy the entire data folder, not individual athletes.



5. Close Windows for Mac
6. Save the DATA file to your MAC Desktop or Documents (or other obvious location)

## Installation of WKO4 (Fresh Start)



### Initial set-up process of WKO4 is dependent upon your current status:

1. Fresh Start – You have not used WKO or TrainingPeaks and have training data stored in separate software or have not training data
2. Install using TrainingPeaks Data – You are a TrainingPeaks account holder housing yours, and/or your athletes data
3. Upgrade from WKO+ 3.0 – You are a current WKO+ 3.0 user upgrading to WKO4

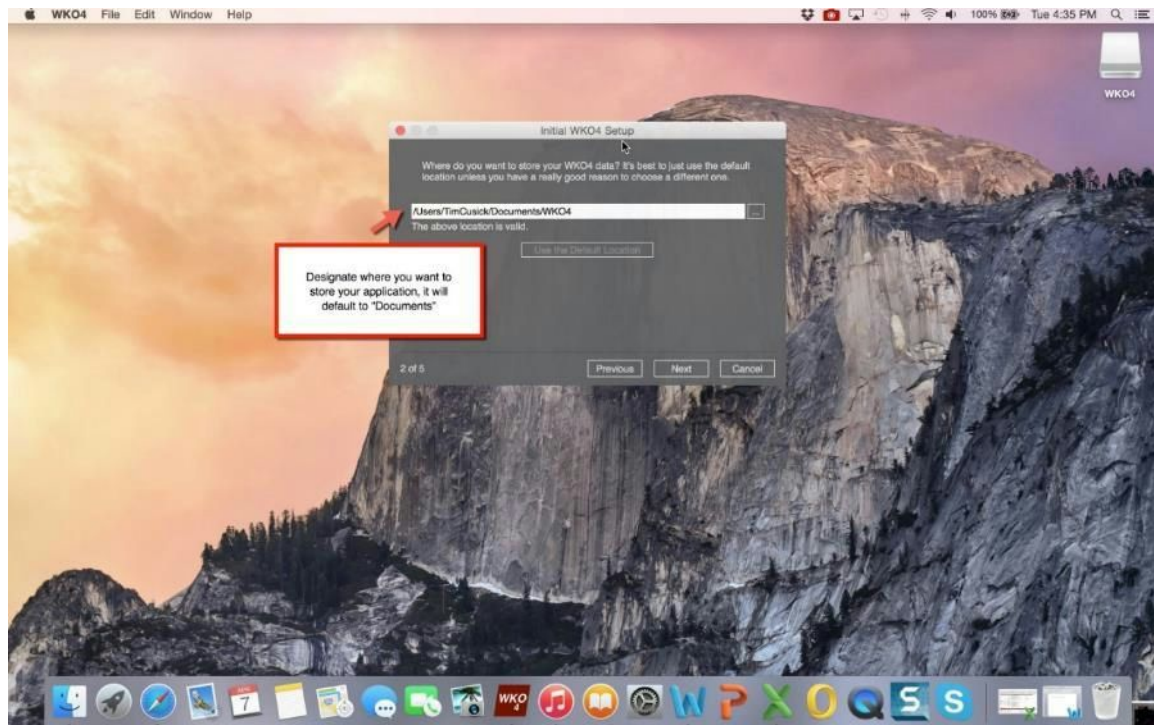
This guide will cover: FRESH START

### The following Screenshots outline the install process:

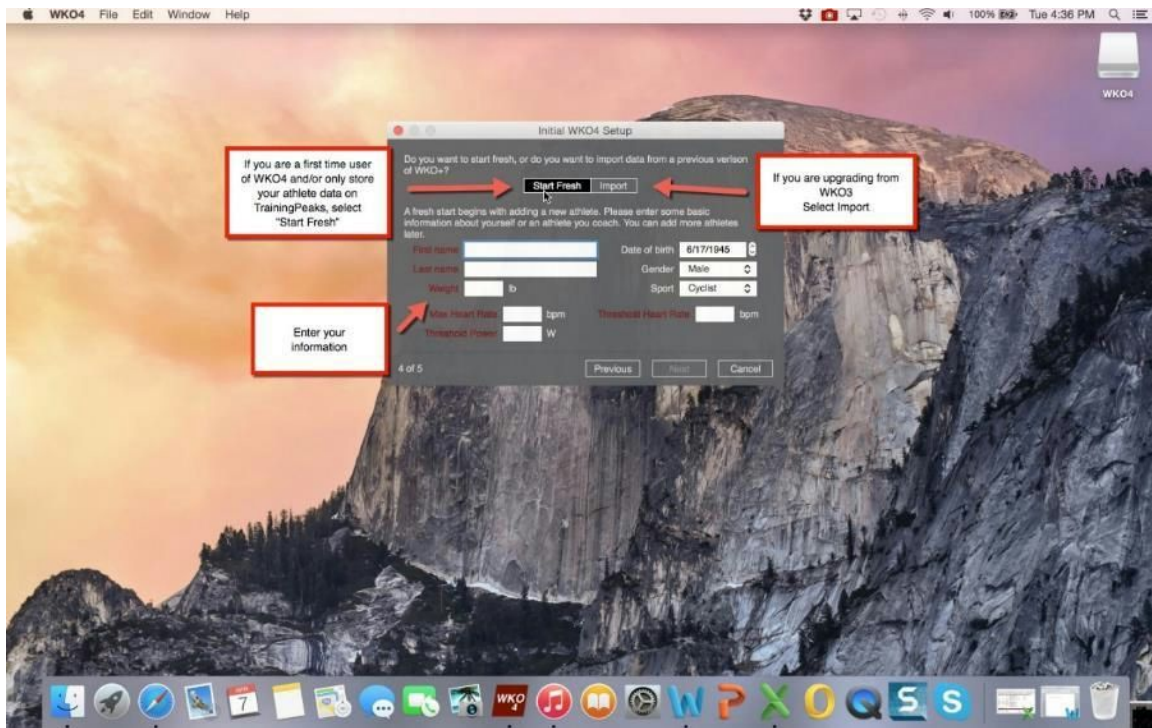
1. Download the WKO4 from TrainingPeaks.com (link).
2. Locate the WKO4 downloaded file in your browser, and double click to launch.
3. Review and agree to EULA.
4. Save WKO4 to your computer by dragging the WKO4 Icon into your Applications folder.



5. Launch the WKO4 Application from your Dock or Finder, this will launch the welcome page of the install wizard.
6. Select a location where you would like to store the WKO4 applications, we suggest accepting the default location in Documents. Please note, that the WKO4 application cannot be stored in online storage such as iCloud or Dropbox). Click NEXT when complete.

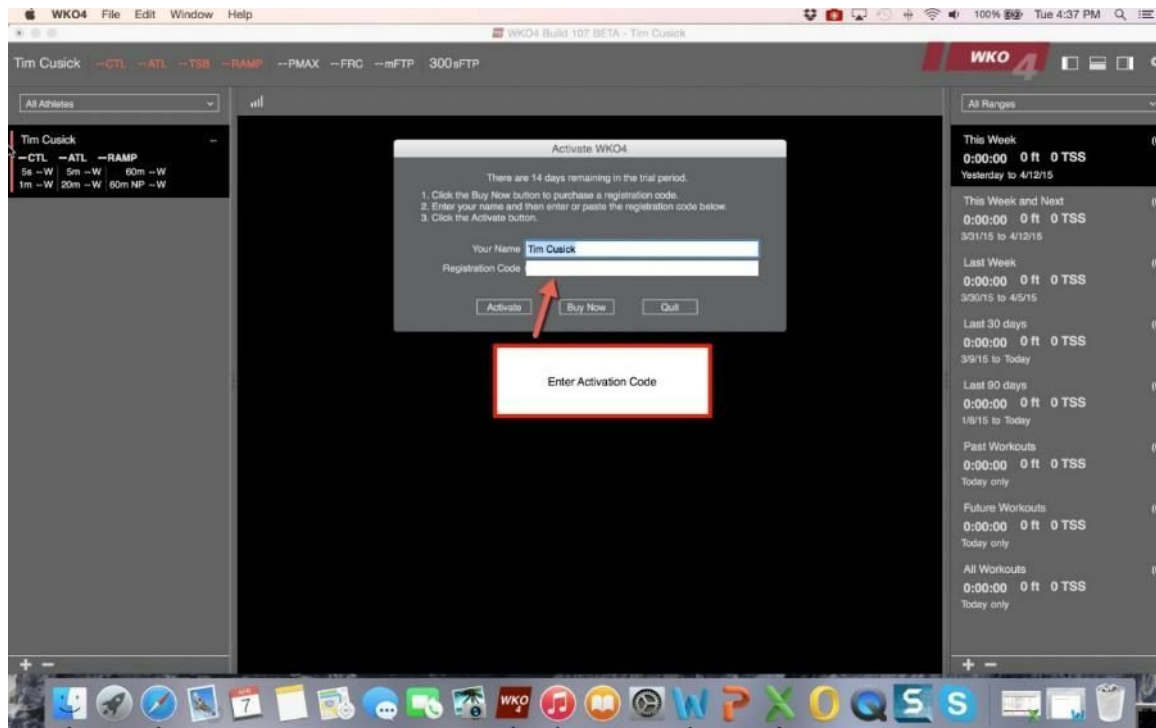


7. Customize your WKO4 application in by choosing color schemes and units, click NEXT when complete.
8. As a new user, select “Start Fresh” and complete your information as directed, click NEXT when complete. The data you need to enter depends on which athlete type you select.



9. Activate (or continue to test) your WKO4 by entering your name and activation code as directed by the wizard.

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10. Import data from your power meter device to begin using (guide link) your new WKO4.



## Installation of WKO4 (Upgrade from WKO+ 3.0)

**Initial set-up process of WKO4 is dependent upon your current status:**

1. Fresh Start – You have not used WKO or TrainingPeaks and have training data stored in separate software or have not training data
2. Install using TrainingPeaks Data – You are a TrainingPeaks account holder housing yours, and/or your athletes data
3. Upgrade from WKO+ 3.0 – You are a current WKO+ 3.0 user upgrading to WKO4

This guide will cover: UPGRADING FROM WKO+ 3.0 FOR MAC

**To complete the upgrade of WKO4 on Mac, you will need a copy of your WKO+ 3.0 data files:**

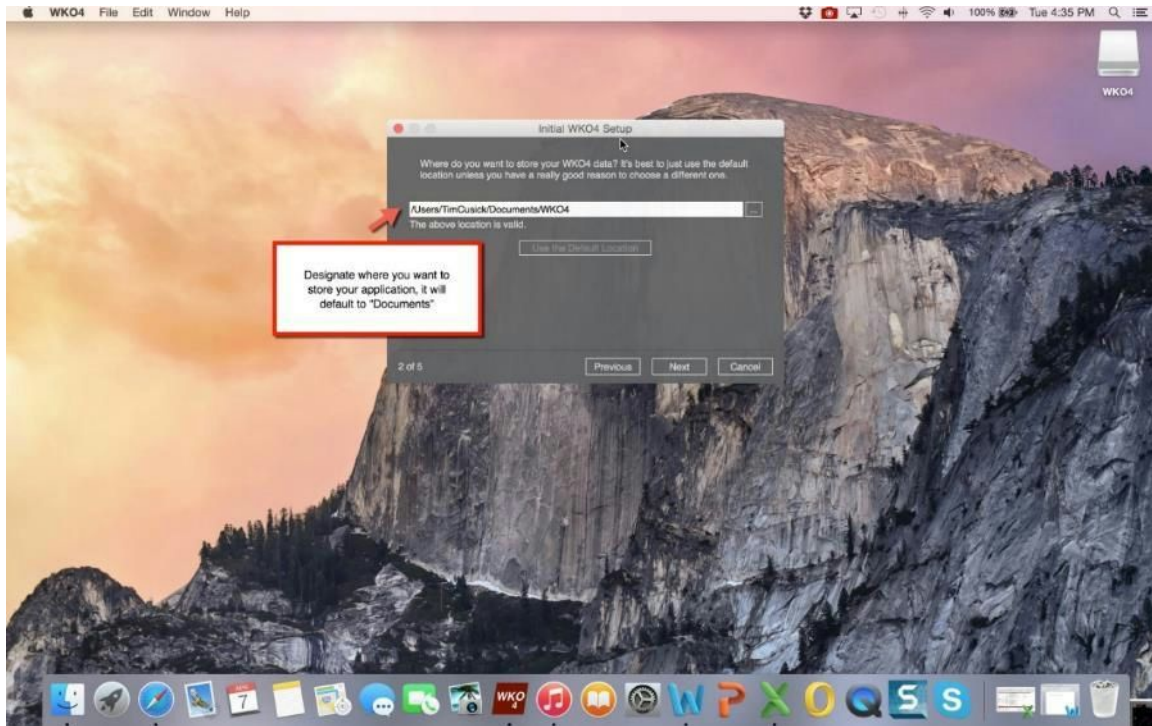
1. Start Microsoft Windows (on either your PC or Virtual Machine on your Mac)
2. Navigate to your WKO+ Data Folder
  - a. Documents>TrainingPeaks>WKO>data
3. COPY the DATA folder to a USB memory stick or another storage device of your choosing. DO NOT DELETE YOUR ORIGINAL WKO+ FILES.
4. You can shut down Windows now.

**The following Screenshots outline the install process:**

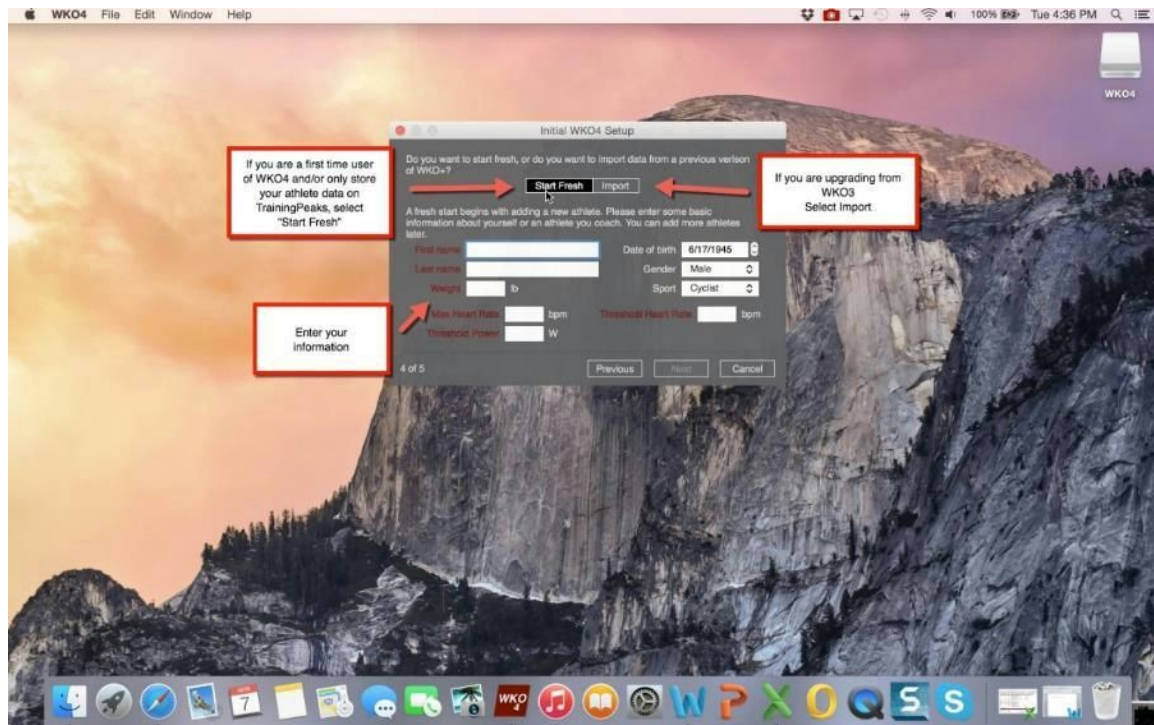
1. Download the WKO4 from TrainingPeaks.com (link)
2. Locate the WKO4 downloaded file in your browser, and double click to launch
3. Review and agree to EULA
4. Save the installation to your computer by dragging the WKO4 Icon into your Applications folder



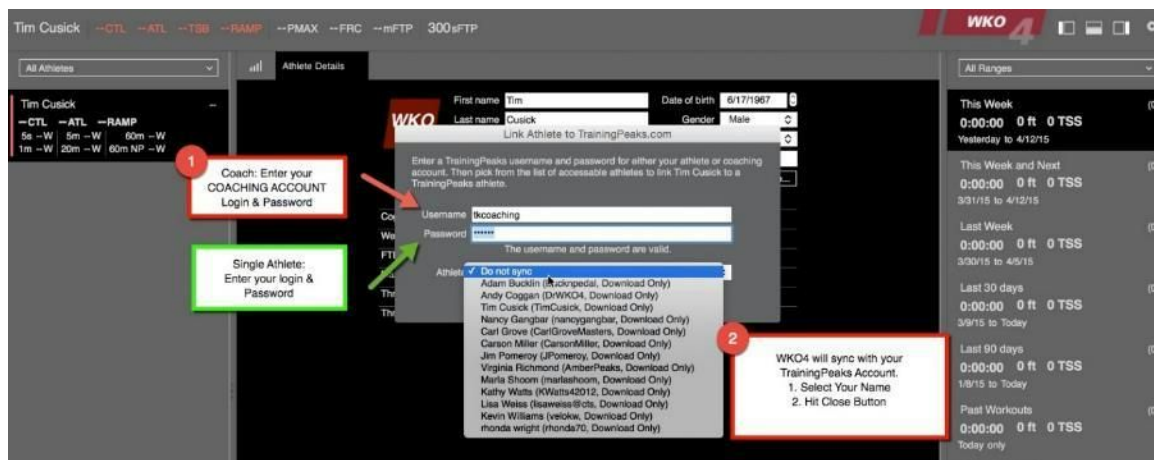
5. Launch the WKO4 Application from your Dock or Finder, this will launch the welcome page of the install wizard.
6. Select a location where you would like to store the WKO4 applications, we suggest accepting the default location in Documents. Please note, that the WKO4 application cannot be stored in online storage such as iCloud or Dropbox). Click NEXT when complete.



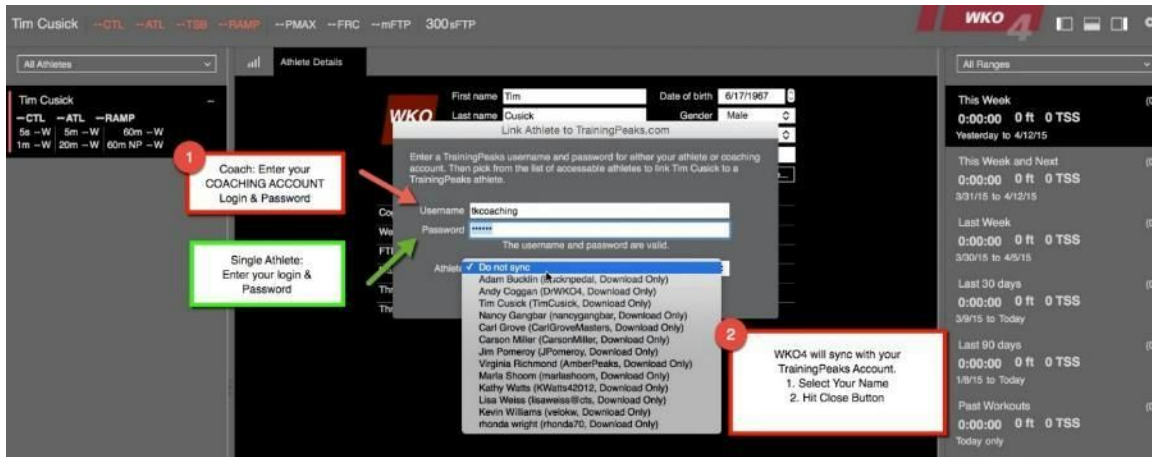
7. Customize your WKO4 application in by choosing color schemes and units, click NEXT when complete.
8. As a **WKO+ 3.0 user** select import and hit next.



9. Navigate to the USB memory stick or other storage where you copied your WKO+ 3.0 Data folder. Once located, hit next.
10. WKO4 will import WKO+ 3.0 data and build your new WKO4 athlete list. This may take some time, please be patient.
11. To link your TrainingPeaks Coaching Account to your WKO4 by entering your COACHING ACCOUNT username and password, click on the athlete dropdown (will read "Do not sync" initially). This will display your TrainingPeaks athlete list.
12. Select an athlete from the list and select download only (single users get the option of upload and download, for coaches to access this feature, simply enter your personal account username and password for your account only).



- To set up the rest of your athletes, simply “associate” each athlete with their matching TrainingPeaks account by, clicking the CHANGE BUTTON to launch the athlete list, select desired athlete.



- Begin using WKO4.



## Managing Your Password

### Initial Login and Password SetUp for Mac:

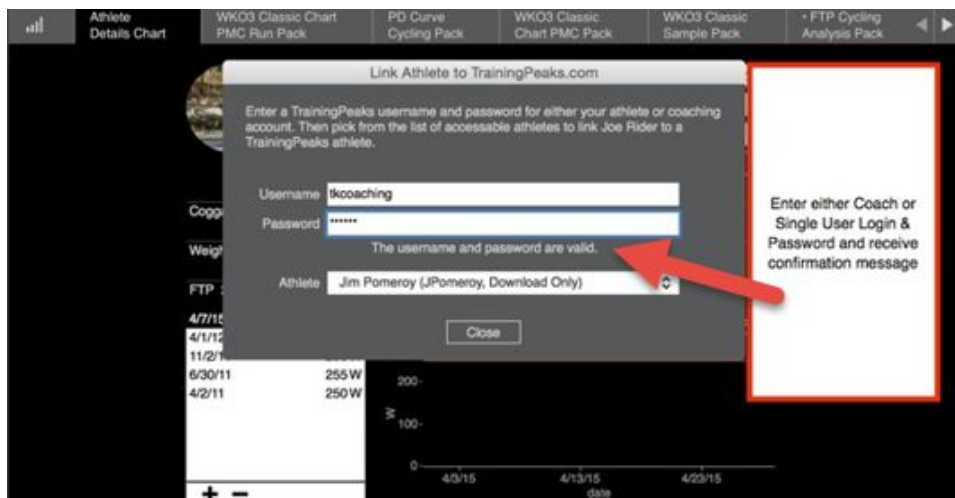
1. Install WKO4 as per guide, if you are upgrading from WKO+ 3.0, your login and password will transfer automatically.
2. Navigate to the Athlete Details tab on the top navigation bar to access the Login and Password Wizard

### The following Screenshots outline the process:

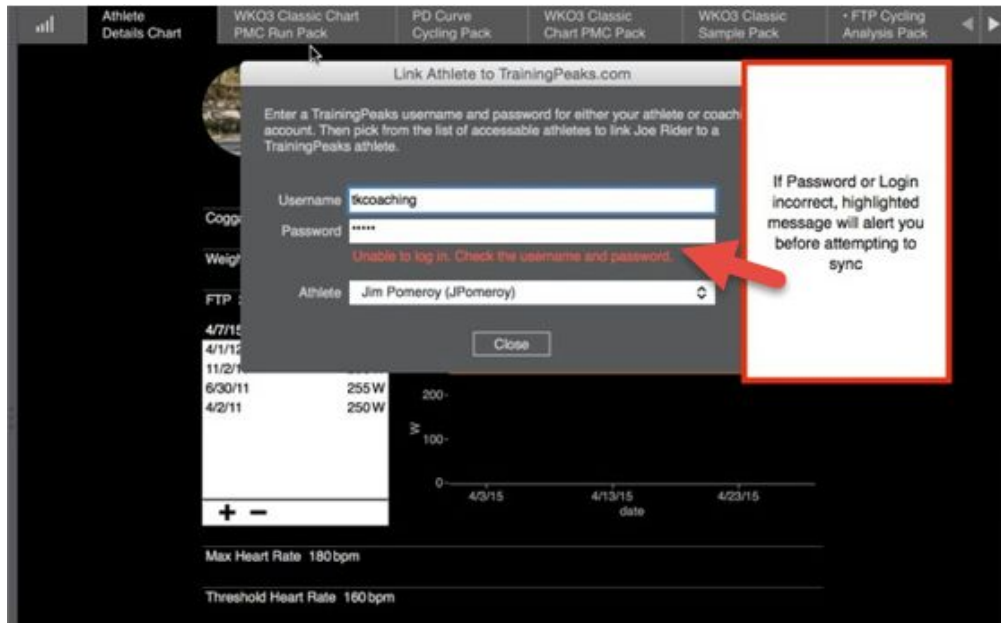
1. In the Athlete Details Tab, click on the “Edit” button to the right of TrainingPeaks Athlete bar.



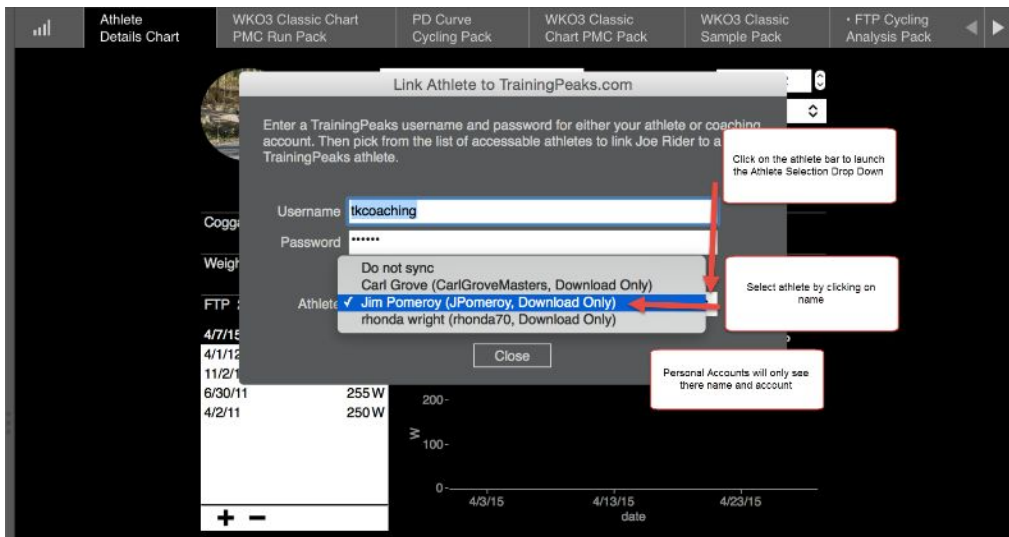
2. Enter your Coaching Account Login and Password to access all athletes in your account.
3. Enter your personal/single account Login & Password to access personal account.



4. WKO4 will confirm your Login and Password in advance of use, check the message just below Password.



- For coaching accounts, once your Login and Password are correct, you can access all the athletes listed in your TrainingPeaks.com account by clicking on the Athlete Box and launching dropdown window.



## Syncing data to TrainingPeaks and pulling down your data from TrainingPeaks

When you first start using WKO4, it's not necessary to do the "Bulk import" of files from TrainingPeaks, as long as you have your data stored in your account on the TrainingPeaks website. By allowing WKO4 to download the data automatically, it will take a little more time to sync up your data in WKO4, and depending on the amount of data stored in TrainingPeaks, it could take a few hours.

### Access your ATHLETE SETTINGS options by:

1. Open WKO4
2. Select Athlete Details from the Chart / Report Navigation bar
3. Review athlete information
4. Note: WKO will auto-sync with TrainingPeaks as long as you supply account information and sync settings as below.

### How to View settings and choose how you want to sync:

1. Click on TrainingPeaks athlete range bar, open drop down of all athletes
2. Review or select desired athlete (if you are a coach) or your name as an athlete, set syncing to on or off.
3. Choose "Download Only", which will only pull down the data from TrainingPeaks. If you choose "Download and Upload" then your data will work both ways, both pushing up to TrainingPeaks and also downloading from TrainingPeaks.

**1. Click the "EDIT" Button to access the "Link Athlete to TrainingPeaks" user interface.**

**2. Make sure you have your TrainingPeaks Username and Password correct.**

**3. Select the Athlete in the drop down**

The screenshot shows the WKO4 interface with the 'Link Athlete to TrainingPeaks.com' dialog box open. The dialog box contains the following fields and options:

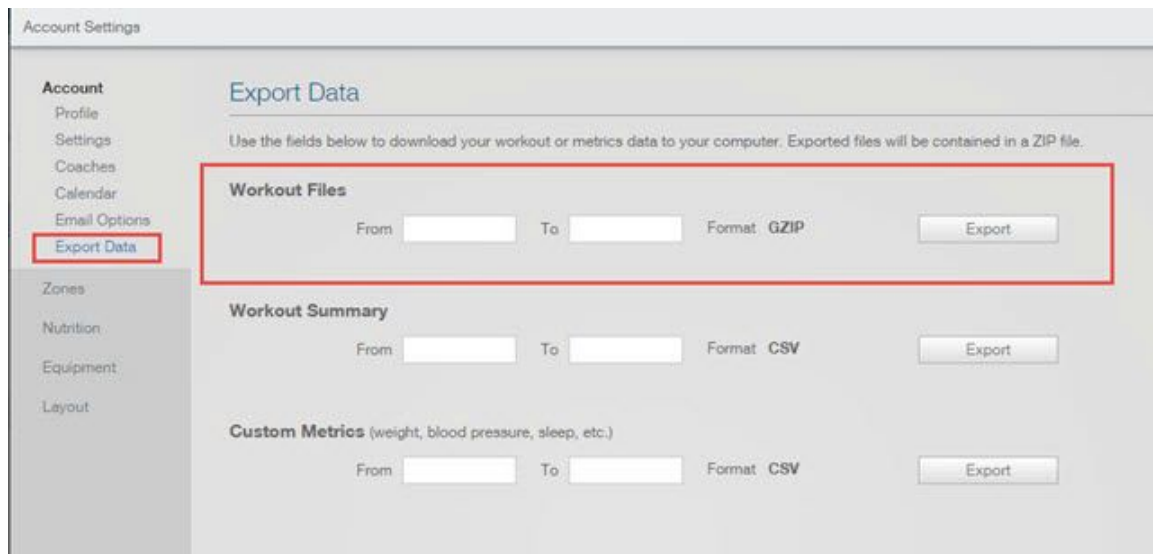
- Username:** rexmba
- Password:** [masked]
- Athlete:** Gilbert Ducournau (giluff, Download Only)

The background shows the 'Athlete Details' section for Gilbert Ducournau, with fields for First name, Last name, Date of birth, Gender, and a dropdown for TrainingPeaks Athlete. The dropdown is set to 'Gilbert Ducournau (via rexmba, Download Only)'.

## Downloading Data from TrainingPeaks.com and Importing into WKO4.

### To Download Data from your TrainingPeaks.com account:

- Log into your TrainingPeaks.com account
- Click your name in the upper right and choose Settings.
- Click on **Export Data** on the left side.
- Change your date range to include all of your dates that have data.
- Click the **Export** button to download a zipped data file. It might take a few minutes depending on how much data you have stored in your account.



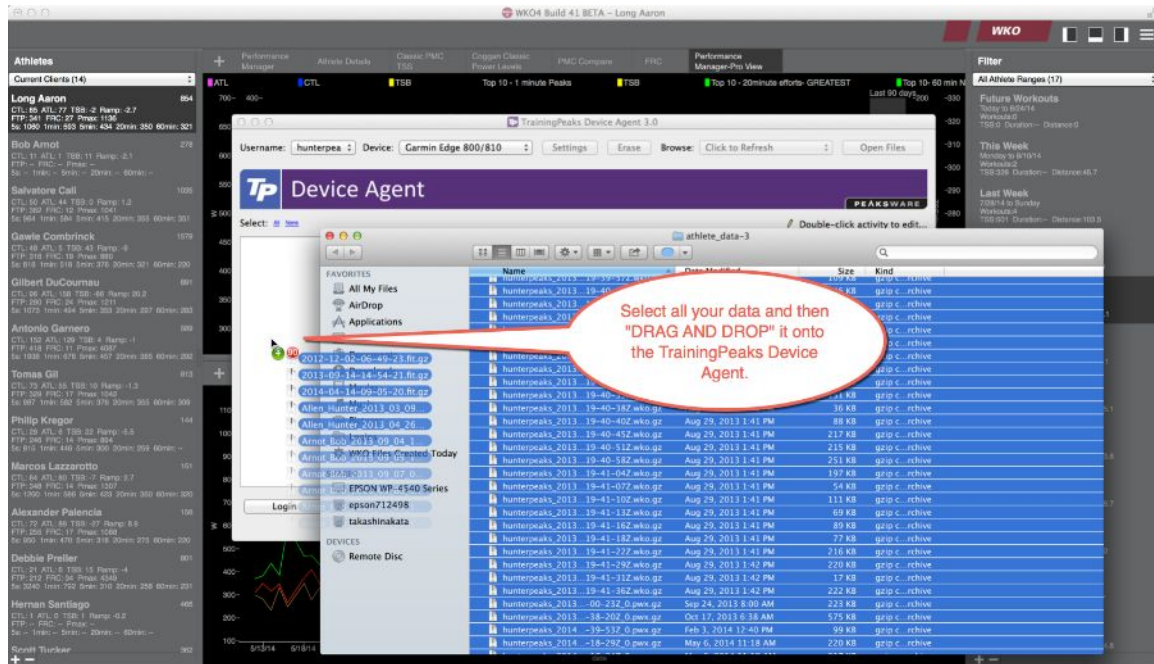
### To Import your data into WKO4:

1. Open TRAININGPEAKS DEVICE AGENT.
2. Find your downloaded data in your Dock.
3. Click on it to open the folder

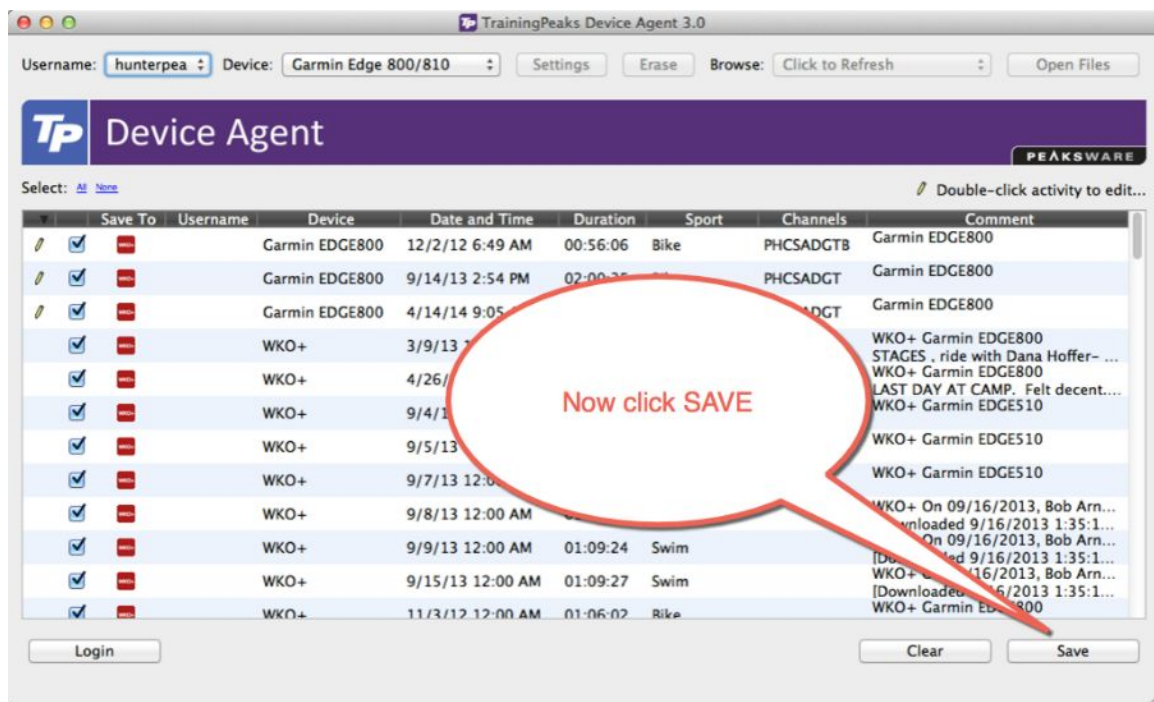


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4. Select all the data in that folder. "Command+A" will "Select All".
5. "DRAG" all that data ONTO the DEVICE AGENT and then "DROP" it.

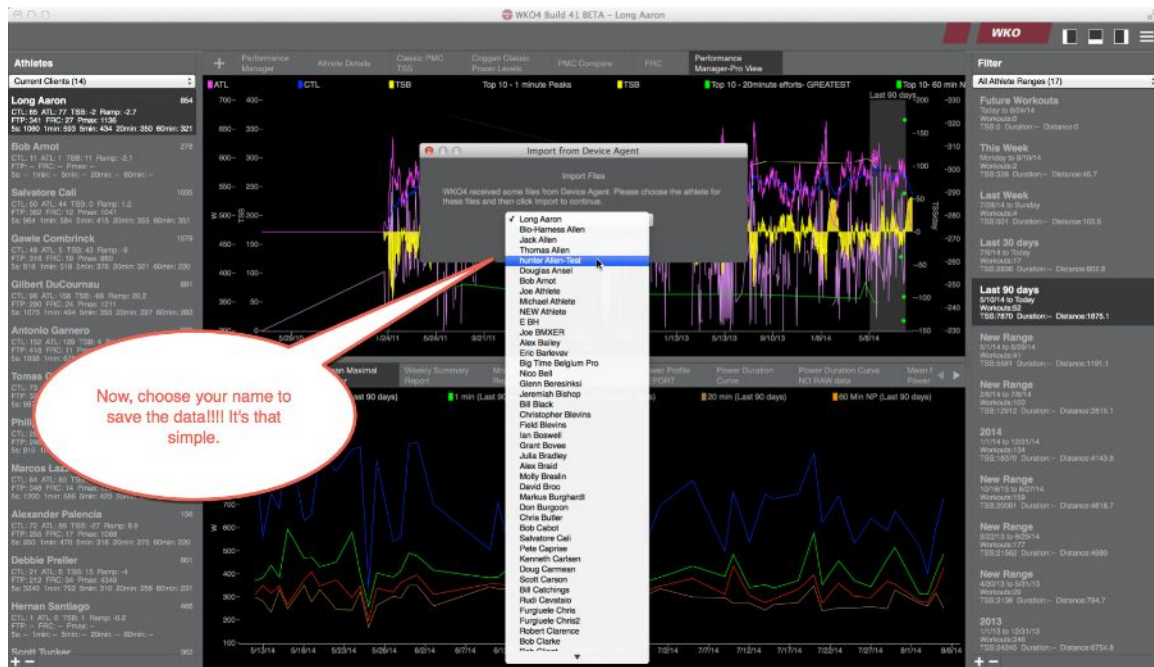


6. Now Click "SAVE" in the bottom right hand corner.





7. After Clicking save, you will want to click “YES” to the question of “overwriting Data or not”.
8. Now, select the correct athlete and “IMPORT” the data into your WKO4.

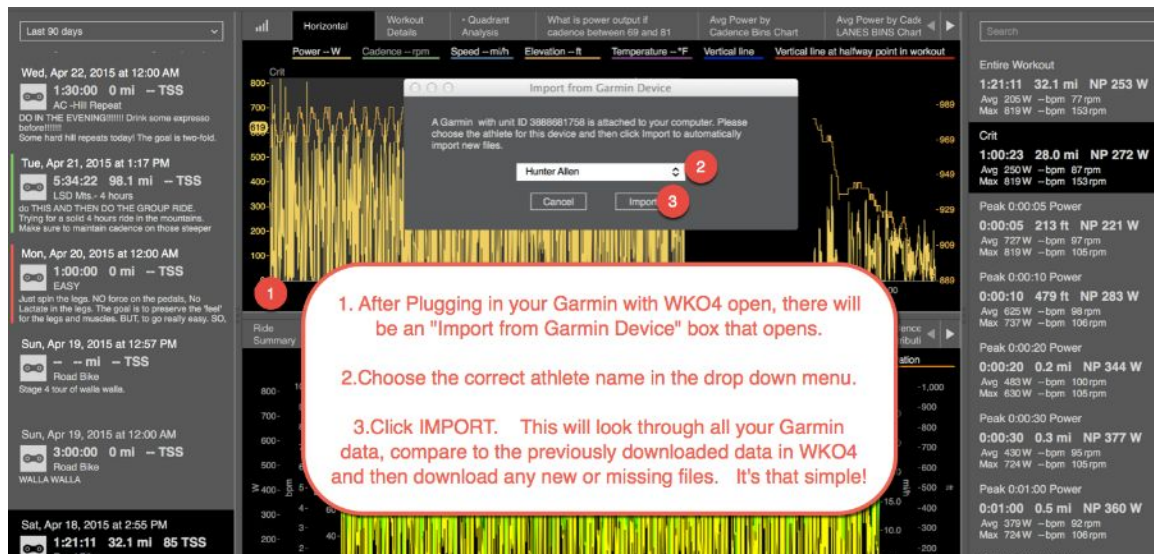


9. It might take a few minutes to import that data set depending on how much data you are importing. Just be patient and soon you'll be up and using WKO4.

## Downloading from a Garmin Device

### To download your data from Garmin:

1. Open WKO4
2. Plug in your Garmin device.
3. After a few seconds, an "Import from Garmin" box will open.
4. Choose the correct name to import that data into their account.
5. Click "Import".
6. The box will disappear and your data will be downloaded from Garmin and put into your data folder.



## Setting Up Device Agent for Download to WKO4

You can send device data files to the following places from Device Agent v3.0:

- TrainingPeaks.com online account
- WKO+ 3.0 or WKO4
- Disk (i.e., your computer's hard drive)

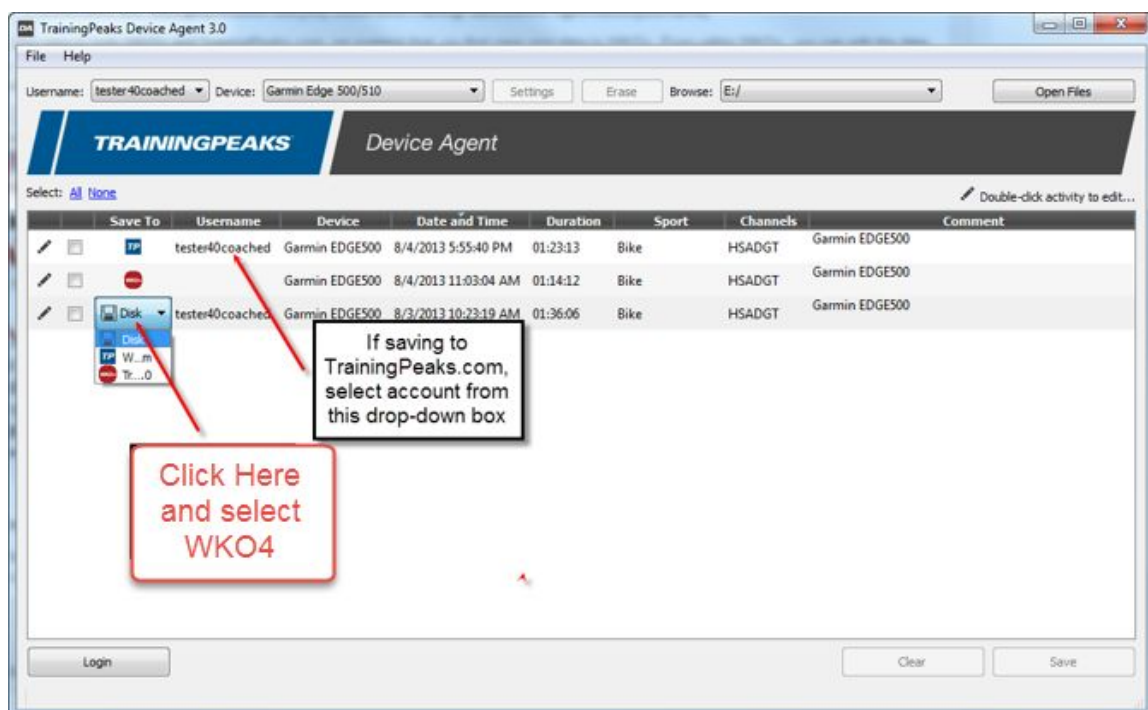
After you download from your training device, there will be a column called "Save to". Click on the icon for each workout and you will have an option to select where the file should go. You set the default location (file...options...save to...), but locations can be changed per workout.

Please note, regardless of what your default "save to" setting is, if you open the Device Agent from WKO+, all your files will default to be saved to WKO+. You can still manually change the "save to" location as mentioned above.

Device Agent v3.0 always will "save to disk" despite your "save to" settings, the files are stored in the following file path locations, depending on what version of Windows you are using.

- Vista or Windows 7: C:\Users\[Windows user]\TrainingPeaks\Device Agent\saved\[username]
- XP or earlier: C:\Documents and Settings\[Windows user]\My Documents\TrainingPeaks\Device Agent\saved\[username]

If you want to save your data to both WKO+ and TrainingPeaks.com, we suggest that you first save your data to WKO+. From within WKO+ you can edit the data and add comments, then upload the file to your TrainingPeaks.com account. If you are a Premium Edition TrainingPeaks.com user, you can do the reverse process of: first saving your data to TrainingPeaks.com and then batch downloading the file(s) to WKO+.





### **Adding a Workout File to Device Agent:**

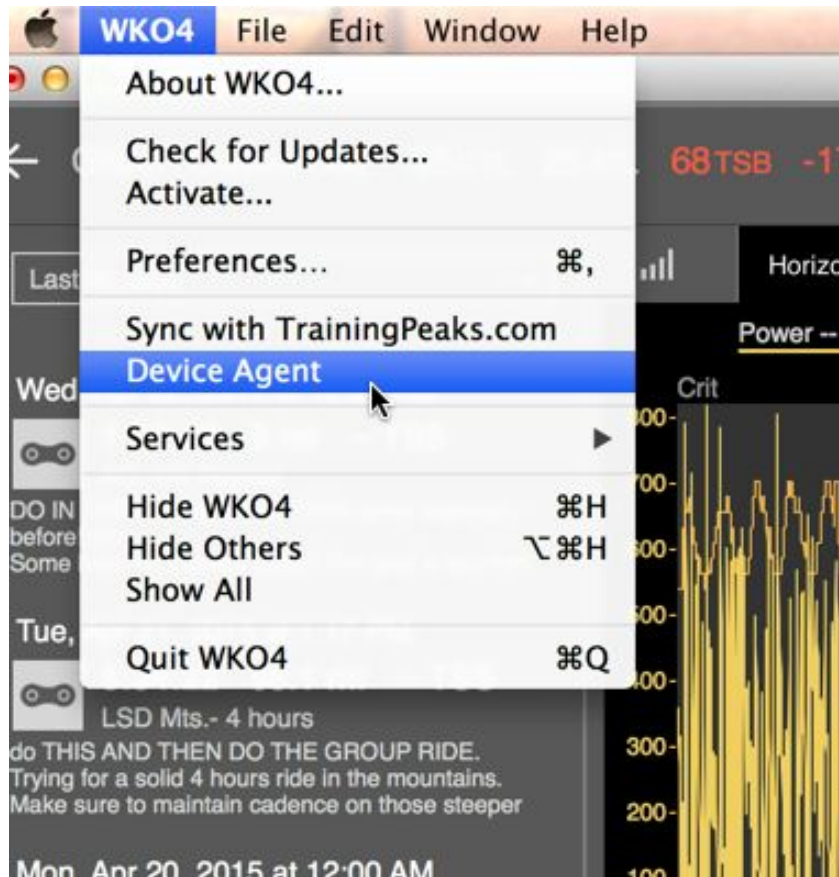
You can add a file to the Device Agent, and then either upload it to TrainingPeaks or into WKO+. This works the same way as saving with a workout that came from a Device. The only difference is how you get it into Device Agent.

1. Open the Device Agent. Make the window small on your screen.
2. Open a Window Explorer window.
3. Go to the folder where you have the file you want to add located.
4. Make that Window Explorer small, so that you can see both windows on your screen at the same time.
5. Drag-and-drop the file from the folder location onto the Device Agent.
6. Now you have the file added and can be saved to WKO+ or TrainingPeaks.com at this point.

## Adding files from a folder/ Drag and Drop

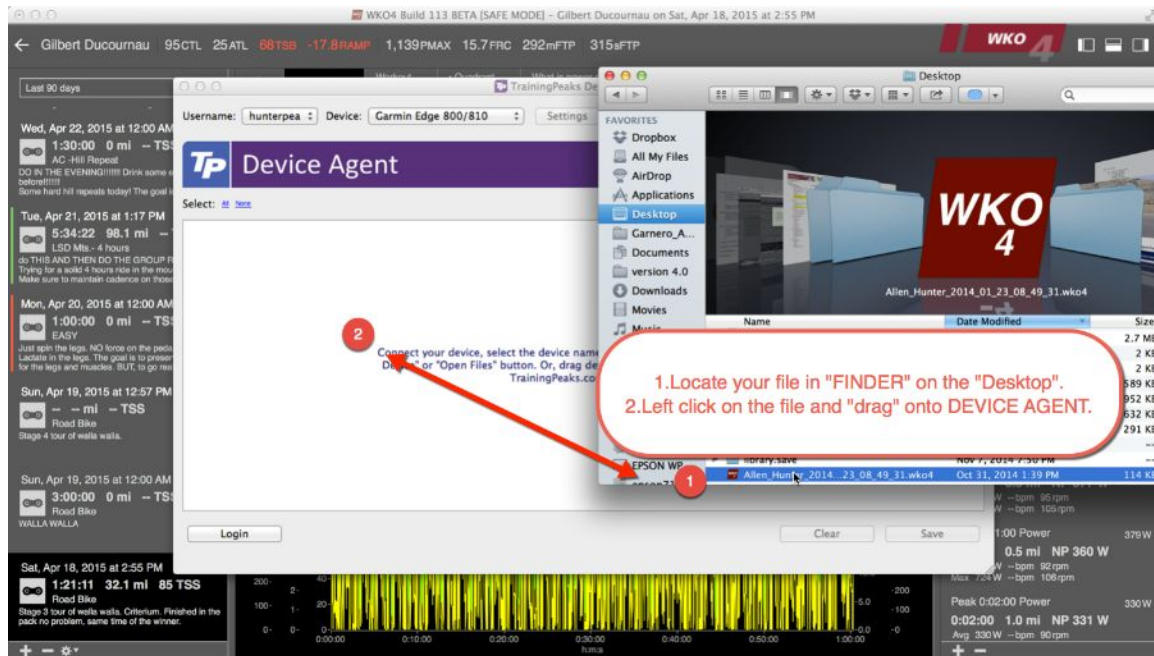
**To add a workout file from a folder or from an email:**

1. Save the workout file on your computer where you can access it easily. We suggest you save the workout file on your “Desktop”.
2. Open WKO4
3. Open DEVICE Agent. Device agent is opened by clicking the WKO Menu in the upper Left hand corner.

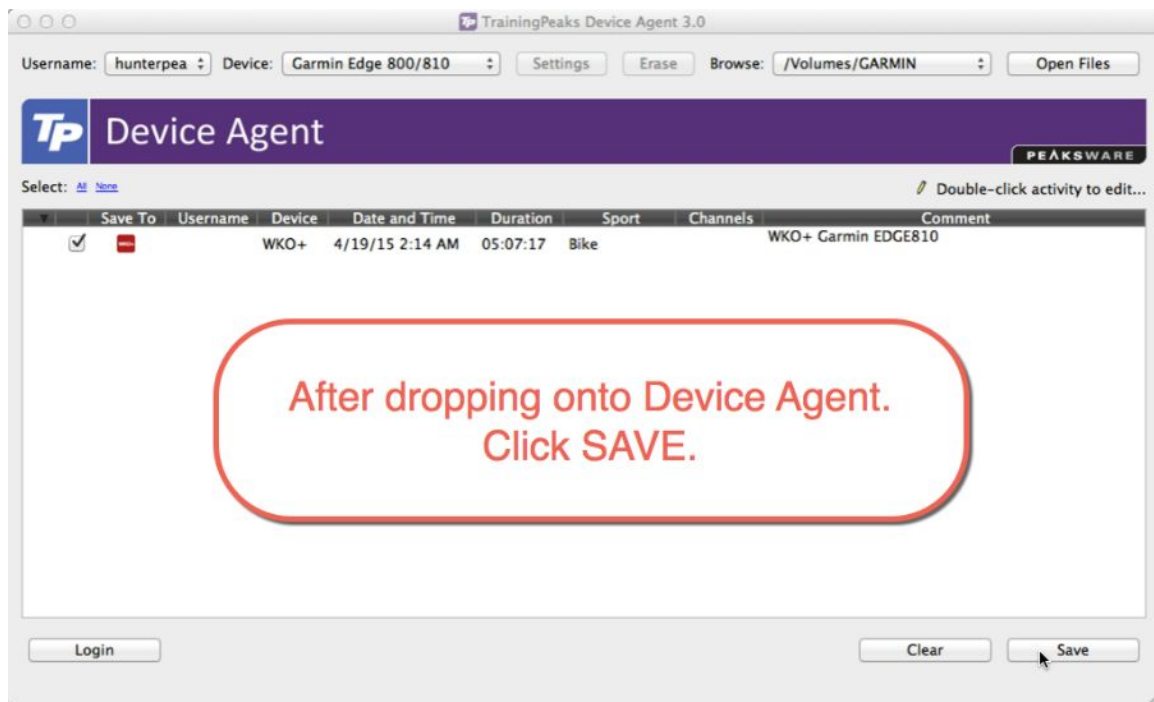


4. Open “FINDER” in your Mac or “Windows Explorer” in your PC.
5. Navigate to the “DESKTOP” and locate your file.
6. With WKO4 in the background and visible, left click on the file and hold down the left click.

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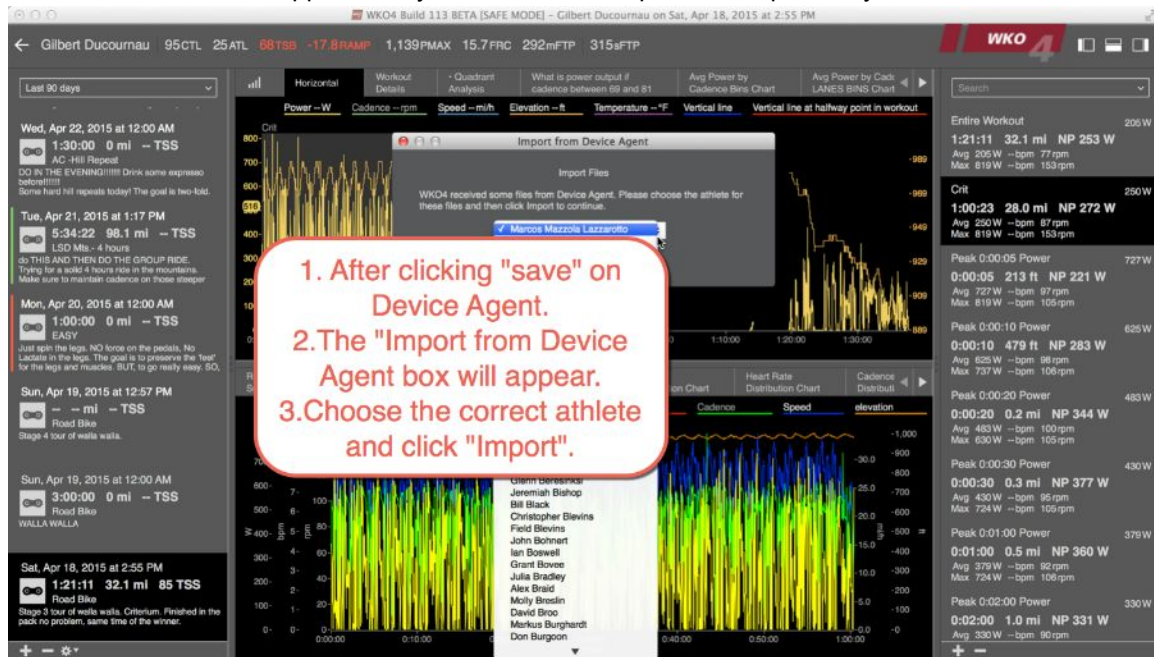


7. "DRAG" the file onto the open DEVICE AGENT.
8. Release the left click and "DROP" the file onto DEVICE AGENT.



9. After a few seconds, an "Import from "Device Agent" box will open.
10. Choose the correct name to import that data into their account.

11. Click "Import".
12. The box will disappear and your data will be imported and put into your data folder.



# Navigation and Set-Up

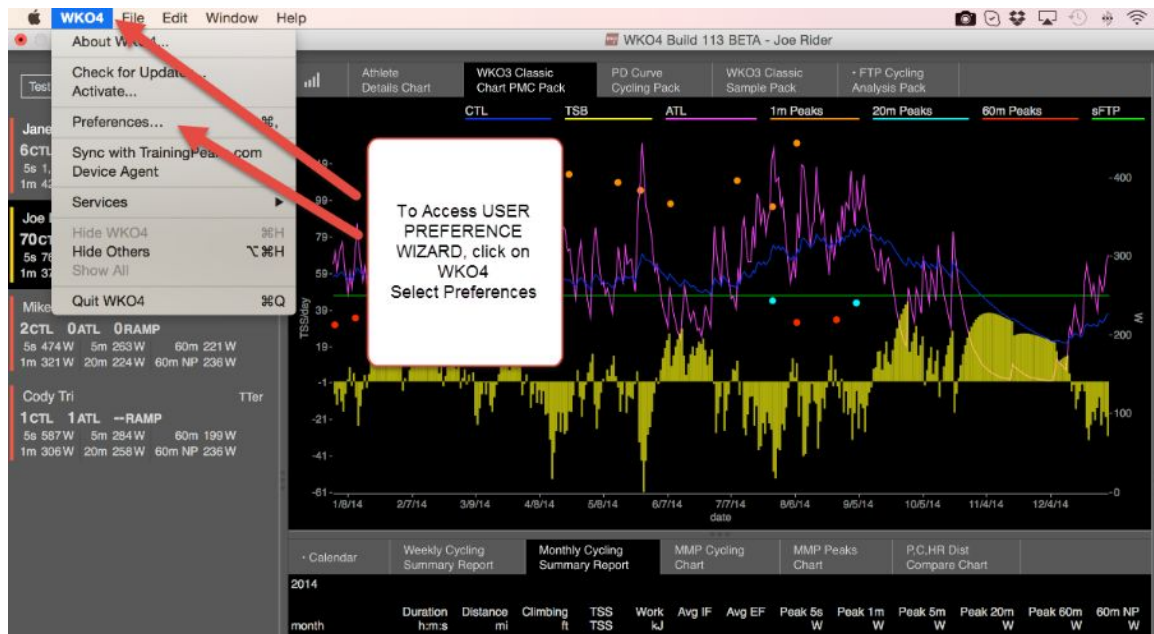
## Setting Preferences & Linking TrainingPeaks Account

### How to access your account preferences:

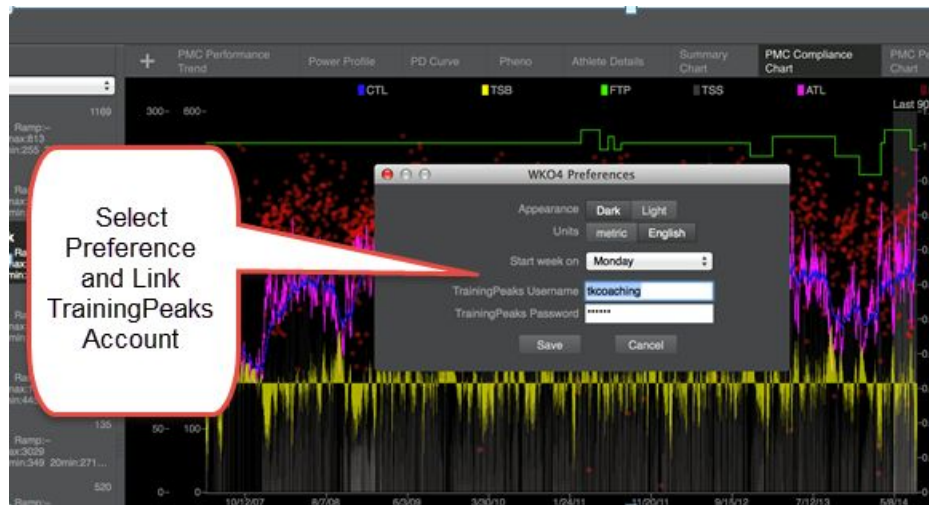
1. Open WKO4
2. Click the WKO4 name in the Mac program bar
3. Select "Preferences"

### From here you can:

- Select Appearance of Dark or Light
- Select Units Metric or English
- Enter TrainingPeaks Account Information
- Change start Week Setting
- Save



**Set preferences / syncing from wizard:**





## Base Navigation in WKO4

### Base Navigation in WKO4: Athlete Level

1. Click on various elements to navigate through WKO4
2. Dark items are “selected”

### Athlete Level:

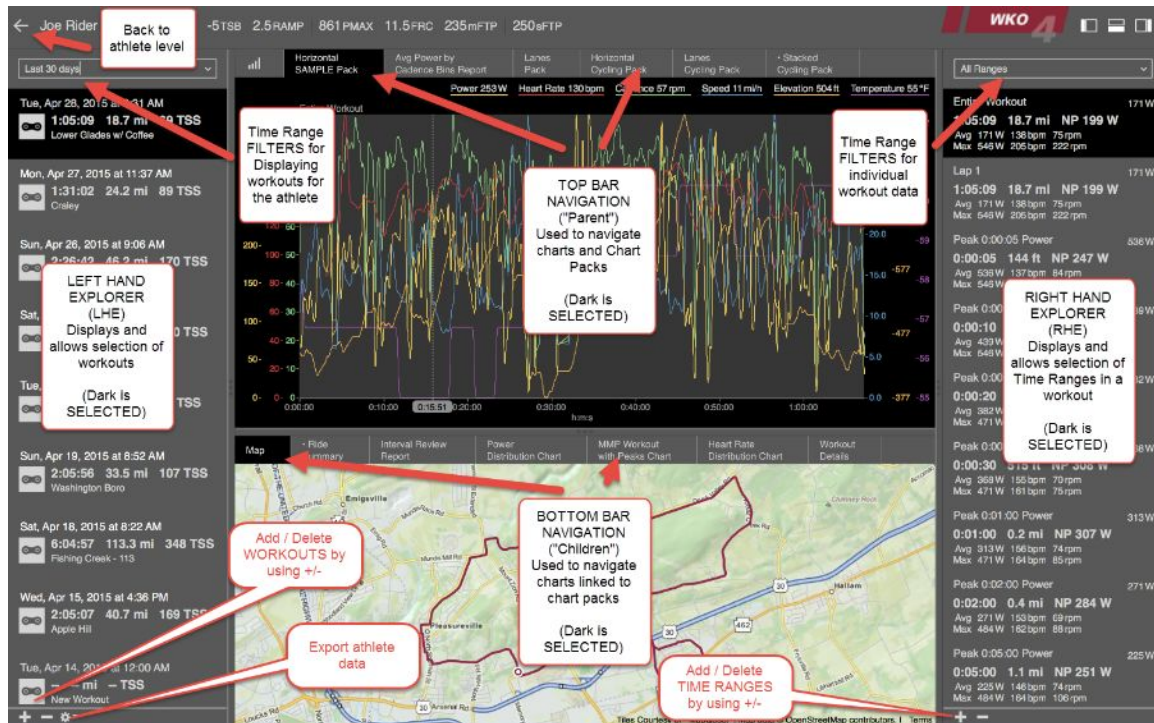


### Base Navigation in WKO4: Workout Level:

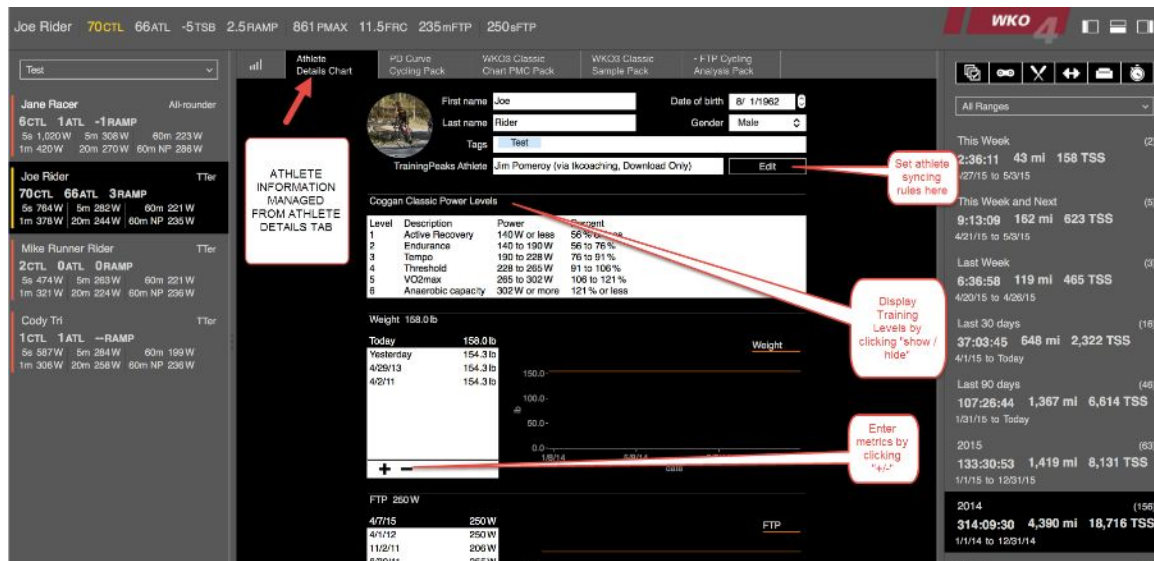
1. Click on various elements to navigate through WKO4
2. Dark items are “selected”
3. Top right corner BACK arrow returns you to Athlete Level



## Workout Level:



## Athlete Details:



## Hero Bar Metrics Setup and Management

### Setting up and managing your “Hero Bar” metrics:

1. Navigate to hero bar
2. Select one of the configurable metrics
  - a. CTL = Chronic Training Load
  - b. ATL = Acute Training Load
  - c. Ramp Rate = Rate of increase of CTL over specific time period
3. Click on the metric to launch the settings wizard (wizard can be access from both athlete and workout levels)
4. Enter desired data, close to save

Joe Rider 70CTL 66ATL -5TSB 2.5RAMP 861 PMAX 11.5 FRC 235mFTP 250sFTP

Test

Jane Racer All-rounder  
6CTL 1ATL -1RAMP  
5s 1,020 W 5m 308 W 60m 2  
1m 420 W 20m 270 W 60m NP 2

Joe Rider  
70CTL 66ATL 3RAMP  
5s 784 W 5m 282 W 60m 22  
1m 378 W 20m 244 W 60m NP 235 W

Mike Runner Rider TTer  
2CTL 0ATL 0RAMP  
5s 474 W 5m 263 W 60m 221 W  
1m 321 W 20m 224 W 60m NP 236 W

Cody Tri TTer  
1CTL 1ATL -RAMP  
5s 587 W 5m 284 W 60m 199 W  
1m 306 W 20m 258 W 60m NP 236 W

Click on each Performance Management Metric to set "Constants" and "alerts" for CTL ATL RAMP

CTL Preferences

CTL Constant 42

Alert if less than 25 or more than 145

Warn if less than 40 or more than 55

Close

First name Joe Date of birth 8/ 1/1962 Gender Male

Weight 154.3 lb

FTP 250 W

4/7/15 250 W  
4/1/12 250 W  
11/2/11 206 W  
6/30/11 255 W  
4/2/11 250 W

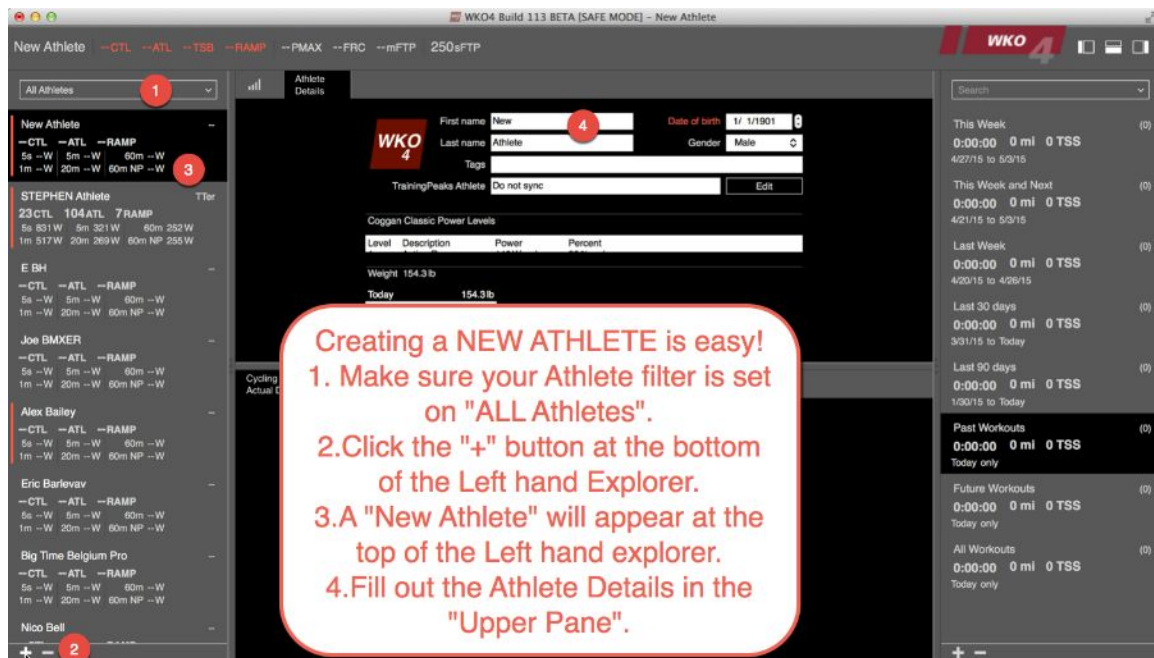
Max Heart Rate 186 bpm

# Managing Athletes, Time, and Data

## Creating a New Athlete

To create a new athlete:

1. Open WKO4
2. In the LHE (left hand explorer), make sure the filter is set on "ALL ATHLETES".
3. Click the "+" button at the bottom of the Left hand Explorer.
4. A "New Athlete" will appear at the top of the Left hand explorer.
5. Fill out the Athlete Details in the "Upper Pane".



## Athlete Tagging

**Access your ATHLETE SETTINGS options by:**

1. Open WKO4
2. Select Athlete Details from the Chart / Report Navigation bar
3. Review athlete information

**How to View settings:**

1. Click on TAGS Bar and enter custom tags
2. Each tag you enter, will auto save to your ranges so you can access in the Athlete Range Bar
3. Click range bar to select tagged groups

The screenshot displays the WKO4 interface. On the left, the 'All Athletes' dropdown is highlighted with a red circle '2'. The main panel shows the 'Athlete Details' for 'STEPHEN Athlete'. The 'TAGS' section is highlighted with a red circle '1'. A red callout box with white text contains the following instructions:

- 1. Tag Athletes by typing in your "tags" in the "TAGS" section.
- 2. Filter by your "tags" in the LHE(left hand explorer).

The interface also shows fields for 'First name' (New), 'Last name' (Athlete), 'Date of birth' (1/ 1/1901), and 'Gender' (Male). The 'TrainingPeaks Athlete' section shows 'Do not sync' and an 'Edit' button.

## Setting Up the Athlete Details Page

Access your **ATHLETE SETTINGS** options by:

1. Open WKO4
2. Select Athlete Details from the Chart / Report Top Navigation bar
3. Scroll up and down as needed

How to View Training Levels settings:

1. Select desired training level process (Coggan, Friel....)
2. View in the zone viewer
3. Update when systems in

Joe Rider 70CTL 66ATL -5TSB 2.5RAMP 861 PMAx 11.5FRC 235mFTP 250sFTP

Test

Athlete Details Chart PD Curve Cycling Pack WKO3 Classic Chart PMC Pack WKO3 Classic Sample Pack FTP Cycling Analysis Pack

Jane Racer All-rounder  
6CTL 1ATL -1RAMP  
5s 1,020 W 5m 308 W 60m 223 W  
1m 420 W 20m 270 W 60m NP 266 W

Joe Rider TTer  
70CTL 66ATL 3RAMP  
5s 794 W 5m 282 W 60m 221 W  
1m 378 W 20m 244 W 60m NP 235 W

Mike Runner Rider TTer  
2CTL 0ATL 0RAMP  
5s 474 W 5m 263 W 60m 221 W  
1m 321 W 20m 224 W 60m NP 236 W

Cody Tri TTer  
1CTL 1ATL --RAMP  
5s 587 W 5m 284 W 60m 199 W  
1m 306 W 20m 258 W 60m NP 236 W

Open and Select Training Levels by clicking on the Down Arrow to launch the drop down box featuring different training levels system

First name Joe Date of birth 8/ 1/1962  
Last name Rider Gender Male  
Tags Test  
TrainingPeaks Athlete Jim Pomeroy (via kicoaching, Download Only) Edit

Coggan Classic Power Levels

| Level | Description        | Pow |
|-------|--------------------|-----|
| 1     | Active Recovery    | 140 |
| 2     | Endurance          | 140 |
| 3     | Tempo              | 190 |
| 4     | Threshold          | 228 |
| 5     | VO2max             | 265 |
| 6     | Anaerobic capacity | 302 |

Weight 158.0lb

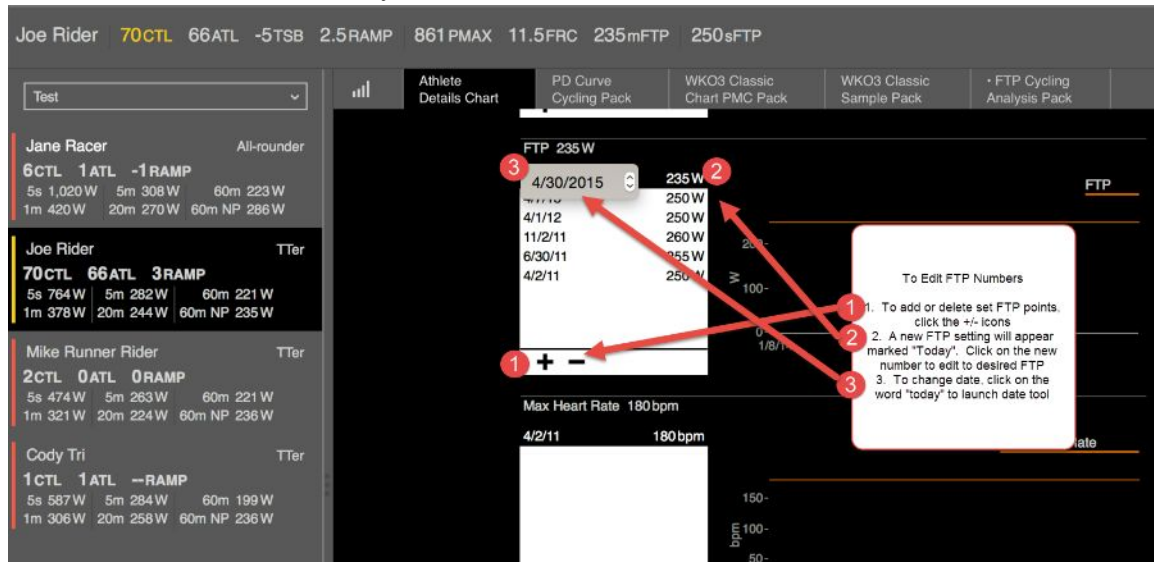
Today 158.0lb  
Yesterday 154.3lb  
4/29/13 154.3lb  
4/2/11 154.3lb

100.0-  
50.0-



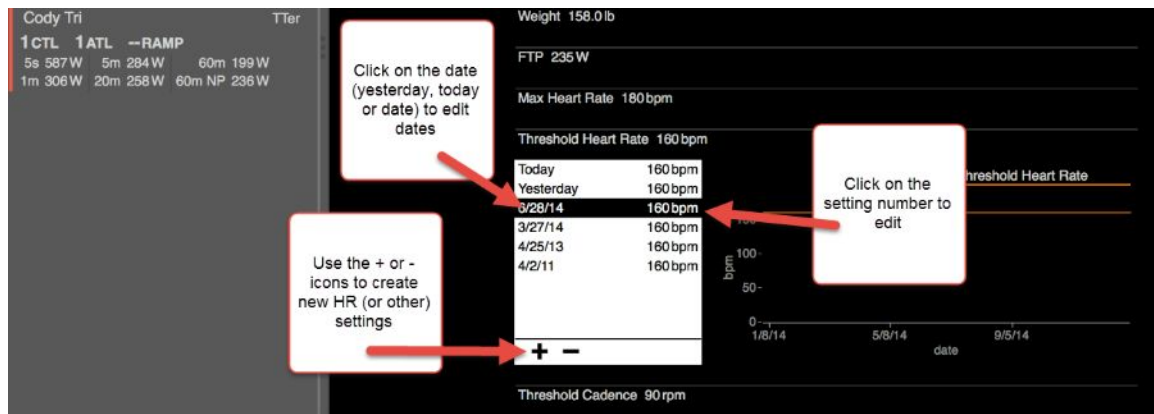
## How To Set FTP:

1. Scroll down as needed
2. Click the + / - button to add a new FTP setting / Delete an FTP setting
3. Click on new FTP number to edit FTP
4. Click on new date "Today" to edit date



## How To Set HR / Pace / Other Metrics:

1. Scroll down as needed
2. Click the + / - button to add a new FTP setting / Delete an FTP setting
3. Click on new number to edit
4. Click on new date "Today" to edit date



## Historical FTP Set up

### Access your ATHLETE SETTINGS options by:

4. Open WKO4
5. Select Athlete Details from the Chart / Report Top Navigation bar
6. Scroll up and down as needed

### How To Set FTP:

1. Scroll down as needed
2. Click the + / - button to add a new FTP setting / Delete an FTP setting
3. Click on new FTP number to edit FTP
4. Click on new date "Today" to edit date

The screenshot shows the WKO4 Athlete Settings interface. On the left, a sidebar lists athletes: Jane Racer, Joe Rider, Mike Runner Rider, and Cody Tri. The main panel displays the FTP settings for Joe Rider. A table shows the current FTP setting of 235 W. Below the table, there are buttons for adding (+) and deleting (-) FTP settings. A date field shows 4/30/2015. Red arrows and numbers 1, 2, and 3 point to the +/- button, the FTP value, and the date field respectively. A text box on the right explains the steps to edit FTP numbers.

**To Edit FTP Numbers**

1. To add or delete set FTP points, click the +/- icons
2. A new FTP setting will appear marked "Today". Click on the new number to edit to desired FTP
3. To change date, click on the word "today" to launch date tool



## How To Historical FTP Using the Power Duration Model:

1. Scroll down as needed
2. Click the + / - button to add a new FTP setting / Delete an FTP setting
3. Click on new FTP number to edit FTP
4. Click on new date "Today" to edit date



## Creating Ranges at ATHLETE levels

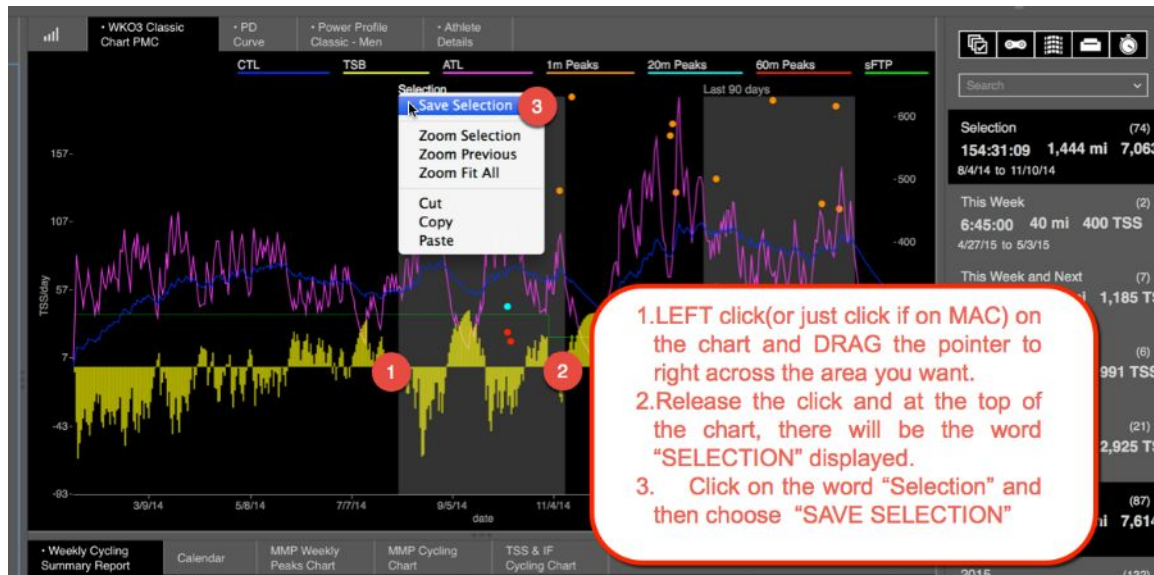
A "range" is a period of time or area of interest that you would like to examine further, or to save for a future time when you want to review it again. At the ATHLETE level, you might want to make a range across two specific months of your training, in order to better examine that area or view the metrics for just those months.

### To Create Ranges (date/time) around your Charts at the ATHLETE level:

1. Open WKO4.
2. Select a chart, in the UPPER Window Pane, for example, the PMC Classic Chart.
3. To create a "range" at the ATHLETE level, first you need to make sure your CHART SETTINGS has the RANGES set to "HIGHLIGHT".
4. Click CONFIGURE on the Chart (small down arrow beside chart button).
5. Click CHART SETTINGS
6. Click HIGHLIGHT under the "RANGES" setting.
7. Close the CONFIGURE BOX



8. LEFT click (or just click if on MAC) on the chart and DRAG the pointer to right across the area you want.
9. Release the click and at the top of the chart, there will be the word "SELECTION" displayed.
10. Click on the word "Selection" and then choose "SAVE SELECTION"



11. Name your selection, for example, "August 1, 2014 to Nov. 15, 2014" and then click CLOSE.
12. Note: you can move the selection very precisely by using the up and down arrows on the "time" dialogue if you want to refine it.

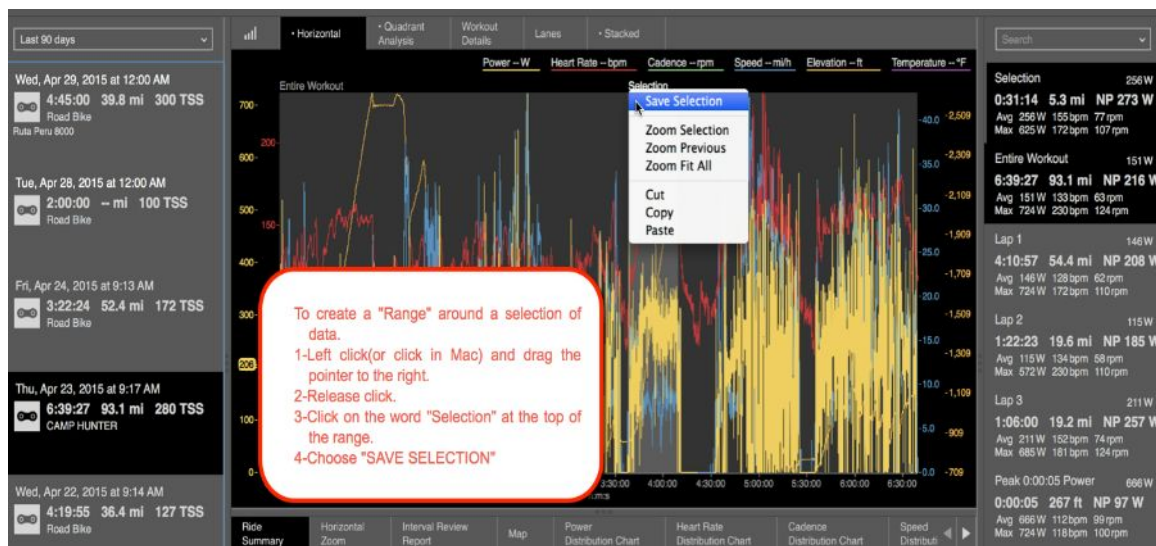


## Creating Ranges at WORKOUT levels

A “range” is a period of time or area of interest that you would like to examine further, or to save for a future time when you want to review it again. At the ATHLETE level, you might want to make a range across two specific months of your training, in order to better examine that area or view the metrics for just those months.

### To Create Ranges (date/time) around your Charts at the WORKOUT level:

1. Open WKO4.
2. Navigate to your workouts, by double clicking on your NAME in the LHE (left hand explorer).
3. Find the workout you would like to “Mark up”.
4. Select the HORIZONTAL, or LANES, or STACKED View.
5. LEFT click (or just click if on MAC) on the chart and DRAG the pointer to right across the area you want.
6. Release the click and at the top of the chart, there will be the word “SELECTION” displayed.
7. Click on the word “Selection” and then choose “SAVE SELECTION”



8. Name your selection, for example, "Buena Vista Climb" and then click CLOSE.
9. Note: you can move the selection very precisely by using the up and down arrows on the "time" dialogue if you want to refine it.





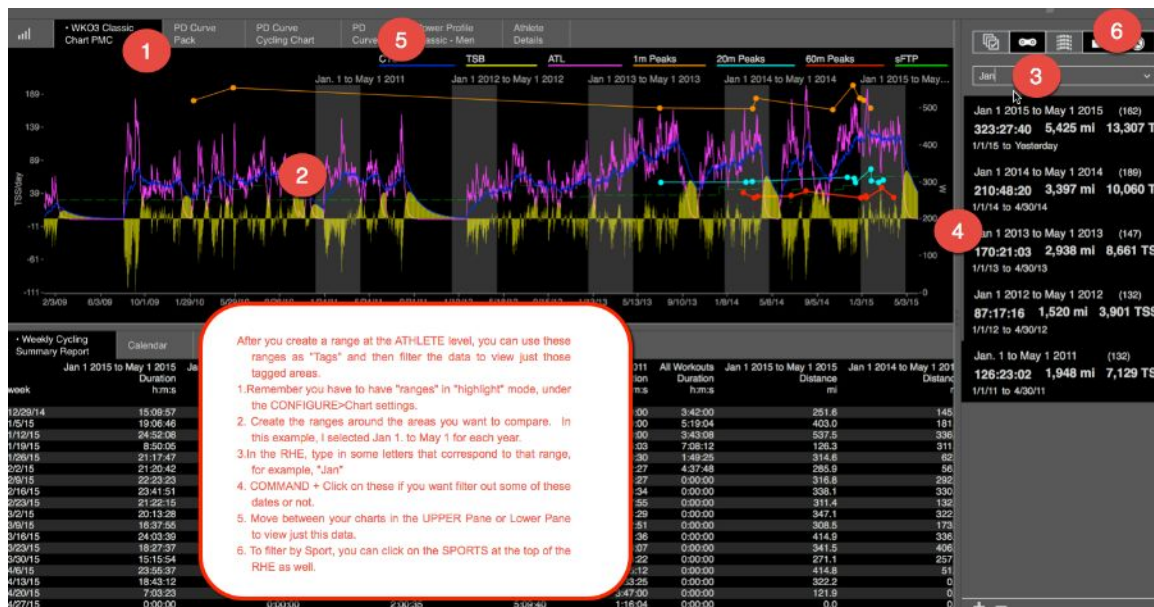
## Creating Tags to Better review your data at the ATHLETE LEVEL

### From the Athlete LEVEL itself:

1. Click on the Athlete you want to view.
2. Click on the Chart you would like to make a "Range" or "Tag" for.
3. Follow the instructions in on "How to create a Range – Athlete Level".
4. After creating a range, in the RHE(right hand explorer)

### From here you can:

1. Type in the FILTER box at the TOP of the RHE and type in the names of your Ranges.
2. For example, create a Range around all the BASE time Periods, then Filter by these periods.
3. Command + Click on each of these Ranges and you will be able to view the data in the charts for these periods alone.





## Creating a MANUAL WORKOUT

There might be a time when you want to create a MANUAL workout. Maybe your device died during your workout, or you forgot to bring your head unit, or some other reason. If this is the case, you can still create a workout, write in your WORKOUT DESCRIPTION and POST WORKOUT NOTES, along with filling out some basic metrics regarding your workout like TSS, Distance, Duration, etc.

### To Create a MANUAL WORKOUT:

1. Open WKO4.
2. Navigate to your workouts (WORKOUT LEVEL), by double clicking on your NAME in the LHE (left hand explorer).
3. At the TOP of the LHE, choose "ALL WORKOUTS"
4. At the bottom of the LHE, click on the "+" button.
5. Your NEW WORKOUT will appear at the TOP of the workout list.

The screenshot shows the WKO4 interface. On the left is the 'All Workouts' list, and on the right is a graph of a workout. Red callouts indicate the steps to create a new manual workout:

1. At the TOP of the LHE, choose "ALL WORKOUTS"
2. At the bottom of the LHE, click on the "+" button.
3. Your NEW WORKOUT will appear at the TOP of the workout list.

The 'All Workouts' list on the left shows several workouts with their dates, times, distances, and TSS values. The graph on the right shows a workout with a power curve and heart rate data.

| Elapsed Duration | Duration | Dist | Climb | VI   | IF   | TSS | Work  | Avg Power | Max |
|------------------|----------|------|-------|------|------|-----|-------|-----------|-----|
| h:m:s            | h:m:s    | mi   | ft    |      |      | TSS | kJ    | W         |     |
| 6:39:27          | 6:39:27  | 93.1 | 7,895 | 1.43 | 0.72 | 280 | 3,518 | 147       |     |

Entire Workout Notes  
Alvaro Castro Mendivil wrote 4/23/15:

6. Click on the "New Workout" at the top of the page
7. Click on "WORKOUT DETAILS" chart.
8. Fill in details you want to fill in.

The screenshot shows the 'New Workout' form in WKO4. Red circles and arrows highlight specific fields: the 'Title' field (containing 'Beach cruiser'), the 'Workout Code' field, the 'Planned' and 'Completed' fields (both showing '20'), the 'Description' field (containing 'Beach Cruiser'), and the 'Workout Notes' field (containing 'Had fun riding Beach Cruiser. Must take 300 watts to make this thing go 18mph!').

**1.** Click on the "New Workout" at the top of the page.

**2.** Click on "WORKOUT DETAILS" chart.

**3.** Fill in details you want to fill in.

**Form Fields:**

- Date and Time: 5/25/2015 12:00 AM
- Title: Beach cruiser
- Workout Code:
- Planned: 20
- Completed: 20
- Description: Beach Cruiser
- Workout Notes: Had fun riding Beach Cruiser. Must take 300 watts to make this thing go 18mph!
- Weight: 172.0 lb
- FTP: 300 W
- Max Heart Rate: 180 bpm
- Threshold Heart Rate: 178 bpm
- Threshold Cadence: 90 rpm

**Coggan Individualized Power Levels:**

| Level | Description   | Power           | Duration            |
|-------|---------------|-----------------|---------------------|
| 1     | Recovery      | 200 W or less   | 56 % or less        |
| 2     | Endurance     | 200 to 271 W    | 56 to 76 %          |
| 3     | Tempo         | 271 to 314 W    | 76 to 88 %          |
| 4a    | Sub-threshold | 314 to 335 W    | 88 to 94 %          |
| 4     | Threshold     | 335 to 378 W    | 0:10:41 to 0:42:26  |
| 5     | VO2max        | 378 to 428 W    | 0:03:12 to 0:10:41  |
| 6a    | FRC           | 428 to 597 W    | 0:00:45 to 0:03:12  |
| 6     | Pmax/FRC      | 597 to 1,051 W  | 0:00:07 to 0:00:45  |
| 7     | Pmax          | 1,051 W or more | 0:00:07 and shorter |

# Managing Workouts, Time, and Data

## Creating a Manual Entry

Sometimes you would like to create a manual entry because your data wasn't recorded for some reason.

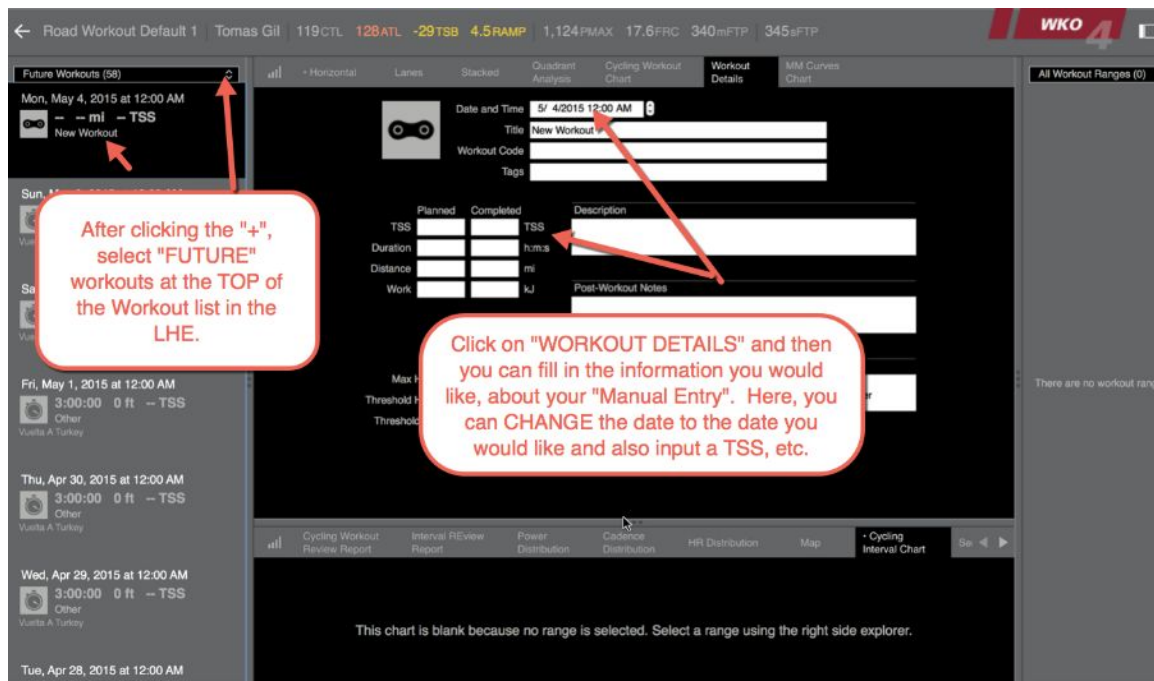
### How to access the workout list:

1. Open WKO4
2. Single Click on desired athlete.
3. Single Click a second time on the desired athlete to access the list of workouts in the LHE (left hand explorer)
4. At the bottom of the LHE, click on the "+" button.



### How to add data to your manual entry:

1. Click on the WORKOUTS at the top of the LHE.
2. Click on the WORKOUT DETAILS button.
3. Add data to this chart, including TSS, Duration, Post workout notes and be sure to CHANGE THE DATE at the top of the workout details page to the correct date.



## How to add Tags, Codes and Metrics to your manual entry:

1. Click on the WORKOUTS at the top of the LHE.
2. Click on the WORKOUT DETAILS button.
3. Add data to this chart, including workout codes, tags and description.

The screenshot displays the WKO4 software interface for manual workout entry. The left sidebar shows a list of recent workouts. The main area is the 'Workout Details' form. Red arrows and boxes highlight key areas for adding data:

- Add workout Metrics Here:** A red box and arrow pointing to the 'Metrics' section, which includes fields for Weight, FTP, Max Heart Rate, Threshold Heart Rate, and Threshold Cadence.
- Tags:** A red box and arrow pointing to the 'Tags' field, which contains 'Garmin EDGE500'. A red callout box states: 'WKO4 Allows you to enter both Workout Codes and/or Tag Words for your workouts to improve search. You can do so here'.
- Description and Post-Workout Notes:** A red box and arrow pointing to the 'Description' and 'Post-Workout Notes' fields. A red callout box states: 'Manage Description and Post-Workout Notes here'.

The right sidebar shows a list of recent workouts with their respective metrics.



## Using Search Filters by Titles and Ranges

To filter workouts but ranges and/or filter time ranges within a workout, follow this process.

### How to access the workout list:

1. Open WKO4
2. Single Click on desired athlete.
3. Single Click a second time on the desired athlete to access the list of workouts in the LHE (left hand explorer)

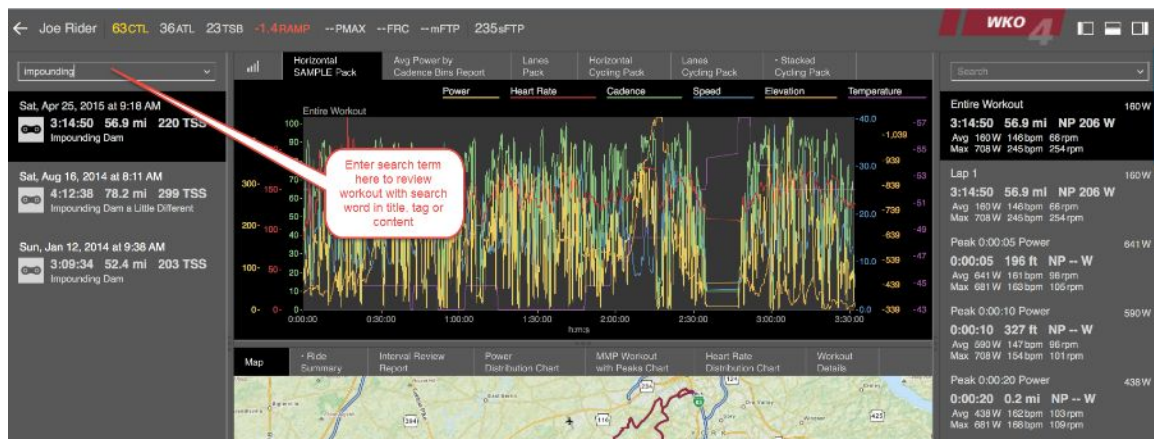
### Base Filter Navigation:

1. WKO4 Features search filters at the top of both the Left Hand Explorer (LHE) and the Right Hand Explorer (RHE).



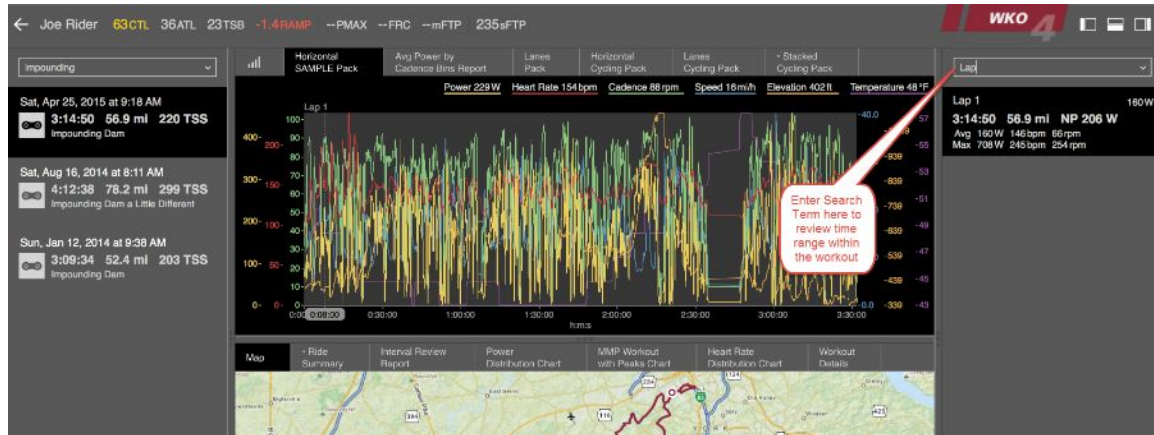
### Filter Workouts by Name, tag, title or content:

1. Enter search term in the workout filter on the top of the LHE



## Filter Time Ranges within a workout by Title or tag:

1. Enter search term in the workout filter on the top of the RHE



# Using Charts & Reports: Athlete Level

## Basic Chart Navigation ATHLETE LEVEL

### Basic Chart navigation:

1. Across the top of the UPPER PANE, you have chart buttons. You can also change your charts in the LOWER PANE, by clicking on each one.
2. Click on each one to change to that chart.
3. Hover over the button to view the "Down Arrow".
4. Click on "Down Arrow" to access the chart CONFIGURE and settings.



### How to change the settings inside each the Chart:

1. By clicking the "Down Arrow" you can access the adjustments inside each chart.
2. CONFIGURE: Change all the main settings for chart.
3. EXPORT: Export this chart and send to a friend.
4. MAKE A COPY: Make a copy and then make some adjustments for a custom version.
5. COPY TO CLIPBOARD: Copy this chart to the clipboard and then paste into an email or document.
6. SAVE CHART TO LIBRARY: Save this chart to your "Chart Picker" library to use with other athletes or for future use. NOTE: The small "."(dot) beside the title words of the chart. This means that this chart has changes that have NOT been saved in the library of charts.

1. By clicking the "Down Arrow" you can access the adjustments inside each chart.

Change all of main settings for charts

Export the chart and send to a friend!

Make a copy and then make some adjustments for a custom version.

Copy the chart to the clipboard and then paste into an email or document.

Save this chart to your "Chart Picker" library to use with other athletes or for future use.  
1. NOTE: The small "." beside the title words of the chart? That means the chart is not in the library in the current version.

By clicking the "Down Arrow" you can access the adjustments inside each chart.

WKO4

Current Clients

Salvatore Calabrese  
48CTL 2ATL -15.8RAMP  
5s 1,000W 5m 285W 60m 285W  
1m 599W 20m 304W 60m NP 297W

Alvaro Castro  
91CTL 74ATL -15.8RAMP  
5s 1,025W 5m 285W 60m 285W  
1m 626W 20m 304W 60m NP 297W

Gawie Combès  
108CTL 103ATL -15.8RAMP  
5s 1,018W 5m 285W 60m 285W  
1m 702W 20m 304W 60m NP 297W

Gilbert Ducournau  
84CTL 11ATL -16RAMP  
5s 984W 5m 358W 60m 285W  
1m 485W 20m 304W 60m NP 297W

Antonio Gamero  
118CTL 81ATL -15RAMP  
5s 1,072W 5m 366W 60m 273W  
1m 586W 20m 317W 60m NP 332W

Tomas Gil  
94CTL 27ATL -11RAMP  
5s 927W 5m 405W 60m 280W

WKO4 Classic Chart PMC

PD Curve PD Curve

1m Peaks 20m Peaks 60m Peaks sFTP

2015

318:27:59 5,318.8 mi 13,307 TSS  
1/1/15 to 12/31/15

2014 (500)  
658:17:29 10,617.9 mi 32,100 TSS  
1/1/14 to 12/31/14

2013 (451)  
591:42:59 9,909.8 mi 29,617 TSS  
1/1/13 to 12/31/13

2012 (410)  
424:24:21 6,789.5 mi 17,892 TSS  
1/1/12 to 12/31/12

2011 (312)  
258:56:03 3,904.8 mi 14,306 TSS  
1/1/11 to 12/31/11

2010 (371)  
388:34:57 5,797.1 mi 17,865 TSS  
1/1/10 to 12/31/10

| Week | 1/1/15 | 1/15/15 | 1/29/15 | 2/12/15 | 2/26/15 | 3/12/15 | 3/26/15 | 4/9/15 | 4/23/15 | 5/7/15 | 5/21/15 | 6/4/15 | 6/18/15 | 7/2/15 | 7/16/15 | 7/30/15 | 8/13/15 | 8/27/15 | 9/10/15 | 9/24/15 | 10/8/15 | 10/22/15 | 11/5/15 | 11/19/15 | 12/3/15 | 12/17/15 | 12/31/15 |
|------|--------|---------|---------|---------|---------|---------|---------|--------|---------|--------|---------|--------|---------|--------|---------|---------|---------|---------|---------|---------|---------|----------|---------|----------|---------|----------|----------|
| W    | 743    | 425     | 318     | 261     | 235     | 262     |         |        |         |        |         |        |         |        |         |         |         |         |         |         |         |          |         |          |         |          |          |
| W    | 839    | 521     | 350     | 265     | 223     | 272     |         |        |         |        |         |        |         |        |         |         |         |         |         |         |         |          |         |          |         |          |          |
| W    | 906    | 492     | 370     | 291     | 262     | 279     |         |        |         |        |         |        |         |        |         |         |         |         |         |         |         |          |         |          |         |          |          |



## Chart Picker: Launching and Navigating at ATHLETE level

The Chart Picker is where your library of charts is located. There are many charts inside your library, along with being able to locate new charts from the “Chart Exchange” website. When you build a new chart and save it to your library, WKO4 will take a small screenshot of the chart and place it in your chart picker for future use.

**To Open a new chart from the Chart Picker: from the Athlete LEVEL itself:**

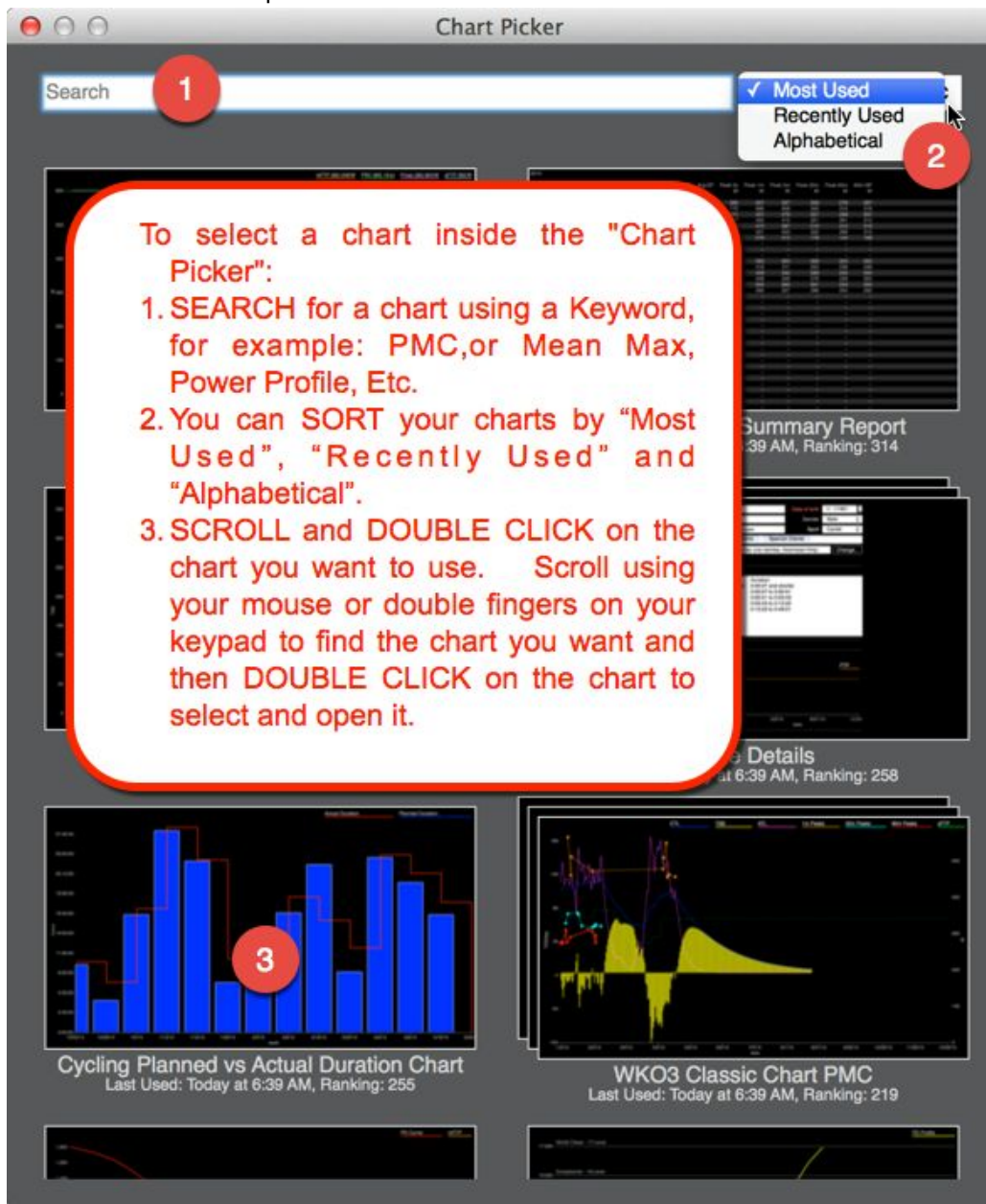
1. Click on the Athlete you want to view.
2. Double Click on the Chart Picker icon in either the upper pane. Or if you “hover” over the icon, you can single click on the down arrow that appears and then choose “Chart Picker”.





**From here you can:**

1. SEARCH for a chart using a Keyword, for example: PMC, or Mean Max, Power Profile, Etc.
2. You can SORT your charts by "Most Used", "Recently Used" and "Alphabetical".
3. SCROLL and DOUBLE CLICK on the chart you want to use. Scroll using your mouse or double fingers on your keypad to find the chart you want and then DOUBLE CLICK on the chart to select and open it.



## What do the default ATHLETE CHARTS mean?

In WKO4, at the ATHLETE level, your charts will display your data over periods of time. These charts are where you can easily see if you have been improving over time. There are hundreds of charts to pick from depending on what data you might like to view. Let's examine your default Athlete Charts and explain a little about each one to better help you analyze your data.

### WKO+ 3.0 Performance Manager Classic:

3. This chart is probably a familiar chart to you, if you have been using TrainingPeaks WKO+ 3.0 for some time. This is the Performance Manager chart.
4. This chart will help you understand your CTL (chronic training load), ATL (acute training load), TSB (training stress balance) and also your "Peaks".
5. The Blue CTL line tells you how much training you have done over the time range and in general the bigger your CTL number, the fitter you are.
6. The Pink ATL line tells you how fatigued you are currently, so if you feel fatigued now, then you would expect a big peak of ATL just in the previous week or two.
7. The TSB tells you how fresh you are, and a positive TSB means that you are fresh and a negative TSB will mean you are fatigued. The higher the positive number, the fresher you are, and conversely the more negative the number, the more fatigued you are feeling.
8. The "Peaks" that are charted in the PMC are your 10 best peak wattages for 1minute, 20 minutes and 60 minutes Normalized Power. Plotting the peak wattages inside the PMC allows you to correlate your best performances with how fatigued or fresh you were.



### Power Duration (PD) Curve:

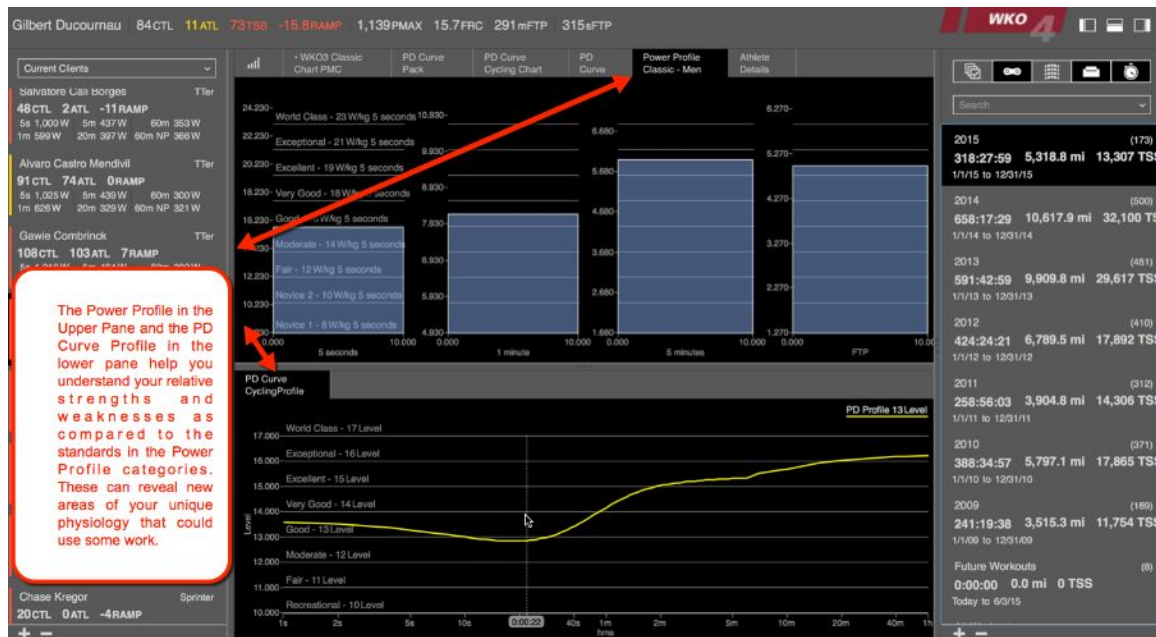
1. This chart is charting all of your Peak wattages for every time period from 1 second to 47 seconds to 5 minutes 12 seconds out to your longest ride. It captures your best average wattage output for every time period that you have achieved.
2. The Yellow line is your actual peaks, and this line is also called the “Mean Maximal Power” line.
3. The red line is the actual Power Duration (PD) line and is created using a proprietary algorithm within WKO4.
4. This chart is used for many other calculations internally inside WKO4, including helping to determine your “Phenotype” (Sprinter, TTer, Pursuiter, All-arounder).
5. There are many ways you can use this data:
  - a. Determine interval wattages
  - b. Determine what is “possible” for a given duration.
  - c. Compare multiple time periods together by COMMAND + “Click” in the RHE.



## POWER PROFILE CLASSIC and PD CURVE PROFILE

The Power Profile chart is a comparison of your Peak 5 seconds, 1 minute, 5 minutes and 60 minutes with the standards in the Power Profile chart. You can compare multiple time ranges by using the COMMAND + “Click” in the RHE.

The PD Curve Profile is new for WKO4. This displays your Peaks across all durations, just like the PD curve, but places this data within the confines of the Power Profile categories. This can reveal new areas of strengths and weaknesses. A big “dip” in the curve will represent a weakness at that time period, and a hump will result in a strength.



## ATHLETE DETAILS

The ATHLETE DETAILS chart is really not a chart, but it's where your personal metrics are displayed. This is a critical area where you can manage details about your TrainingPeaks Sync, Weight, FTP, Training Zones, Threshold Heart Rate and Threshold Pace. This is an important area for you to update as needed.

The Athlete Details Chart is where you can enter critical information like your:

1. TrainingPeaks Sync
2. Weight
3. FTP
4. Max HR
5. Threshold HR
6. Threshold Pace

**Athlete Details**

First name: Gilbert, Date of birth: 5/15/1990, Gender: Male

Last name: Ducoumau

TrainingPeaks Athlete: Gilbert Ducoumau (via remote, Download Only)

**Oxygen Individualized Power Levels**

| Level | Description   | Power         | Duration            |
|-------|---------------|---------------|---------------------|
| 1     | Recovery      | 103 W or less | 95% or less         |
| 2     | Endurance     | 163 to 221 W  | 56 to 76%           |
| 3     | Tempo         | 221 to 250 W  | 76 to 86%           |
| 4a    | Sub-threshold | 250 to 274 W  | 86 to 94%           |
| 4     | Threshold     | 274 to 309 W  | 0:15:02 to 1:07:37  |
| 5     | V02max        | 309 to 350 W  | 0:04:29 to 0:15:02  |
| 6a    | PRC           | 350 to 527 W  | 0:00:59 to 0:04:29  |
| 6     | PruxPRC       | 527 to 934 W  | 0:00:59 to 0:00:59  |
| 7     | Prux          | 934 W or more | 0:00:59 and shorter |

**Weight 132.6 lb**

**FTP 315 W**

**Max Heart Rate 204 bpm**

**Future Workouts**

| Date | Time      | Distance    | TSS        |
|------|-----------|-------------|------------|
| 2015 | 318:27:59 | 5,318.8 mi  | 13,307 TSS |
| 2014 | 658:17:29 | 10,617.9 mi | 32,100 TSS |
| 2013 | 591:42:59 | 9,909.8 mi  | 29,617 TSS |
| 2012 | 424:24:21 | 6,799.5 mi  | 17,892 TSS |
| 2011 | 258:56:03 | 3,904.8 mi  | 14,306 TSS |
| 2010 | 388:34:57 | 5,797.1 mi  | 17,865 TSS |
| 2009 | 241:19:38 | 3,515.3 mi  | 11,754 TSS |



## Chart Packs and linking of upper and lower panes. ATHLETE AND WORKOUT levels

A chart pack is “Parent” chart in the upper pane that has linked “child” charts in the lower panes. The charts in the upper pane generally have a more global view on the data, with the linked charts in the lower pane, being a more detailed view. There are default chart packs that come pre-installed in WKO4 and then you can choose additional ones in the Chart Picker. It is also easy to link charts to parent chart and add more charts to your “Pack” or even create new Packs. This works exactly the same in the ATHLETE level and in the WORKOUT LEVEL.

### How to access a Chart Pack and navigate them:

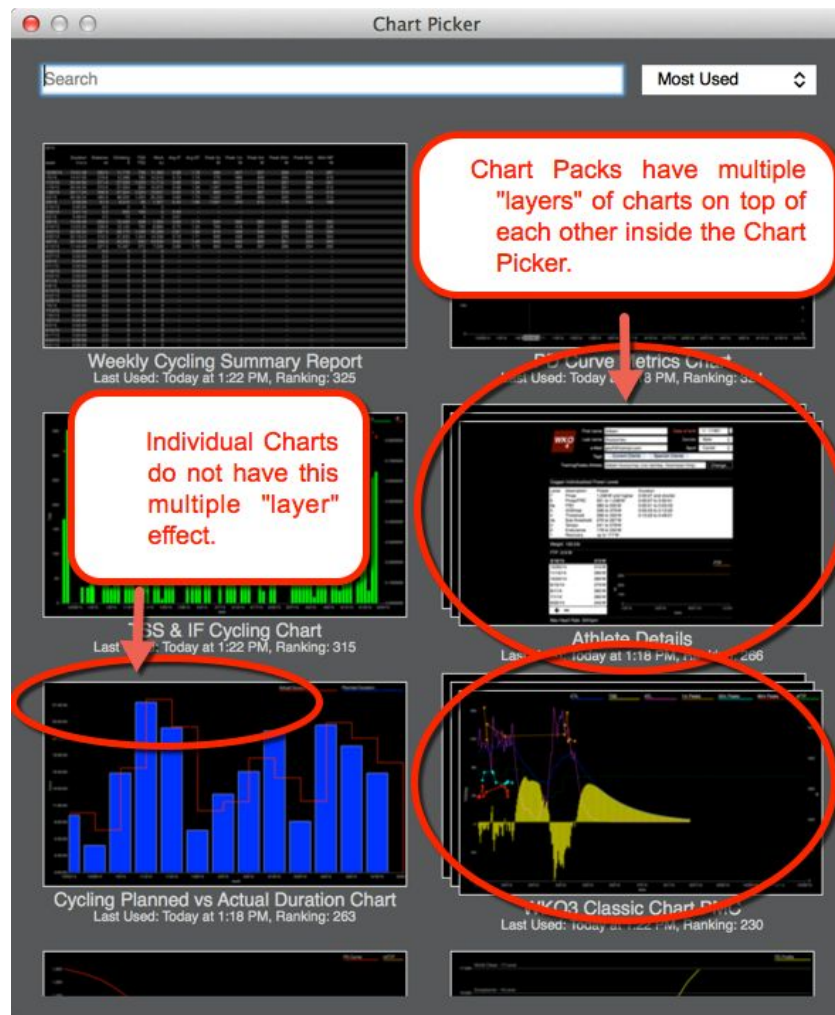
1. Across the top of the UPPER PANE, you have chart buttons.
2. Click on each one to change to that chart or chart pack.
3. Note that the bottom charts change as bottom charts are linked to the upper pane.





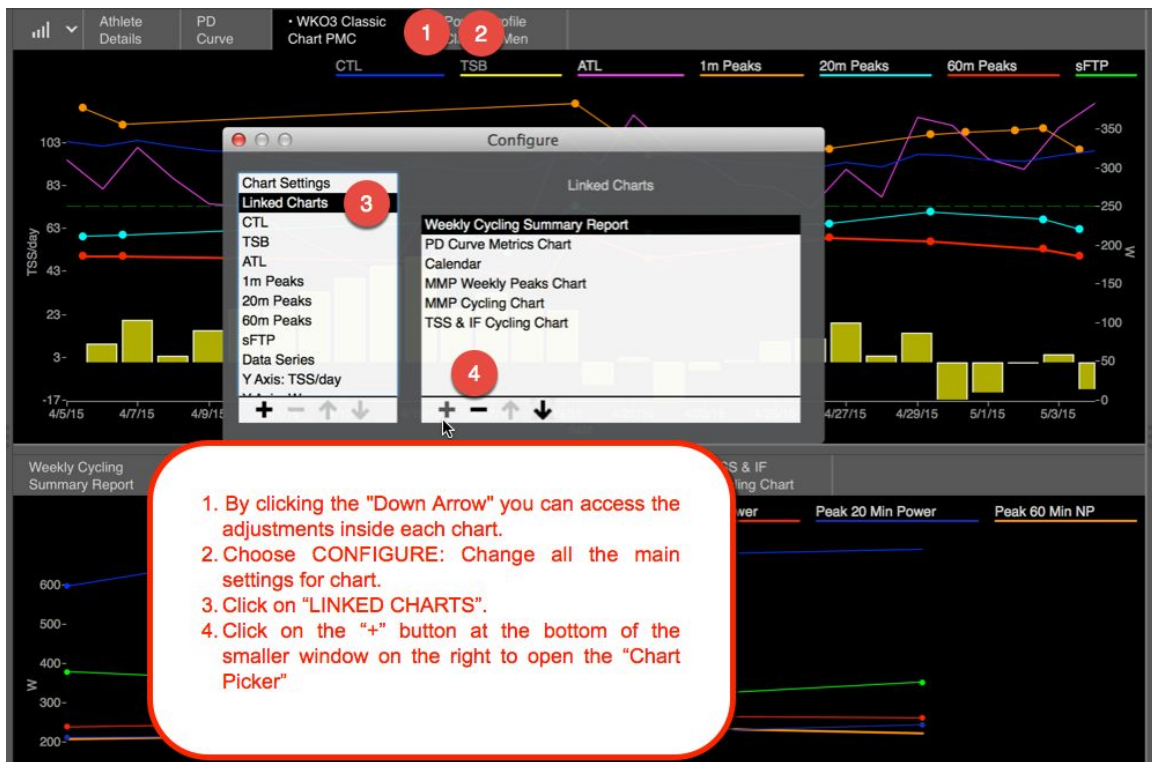
**Identifying Chart Packs inside the Chart Picker and picking a Chart Pack:**

1. When you click on the “Chart Picker” Icon, the chart picker box will appear.
2. Chart Packs will be identified as having multiple “layers” of charts behind the chart being shown.
3. Double Click on the Chart pack you want to view at the Athlete Level.



### How to Link “Child” Charts to the “Parent” Chart:

1. By clicking the "Down Arrow" you can access the adjustments inside each chart.
2. Choose CONFIGURE: Change all the main settings for chart.
3. Click on “LINKED CHARTS”.
4. Click on the “+” button at the bottom of the smaller window on the right to open the “Chart Picker”



### Select a Chart to Link to the Parent and SAVE the new Pack:

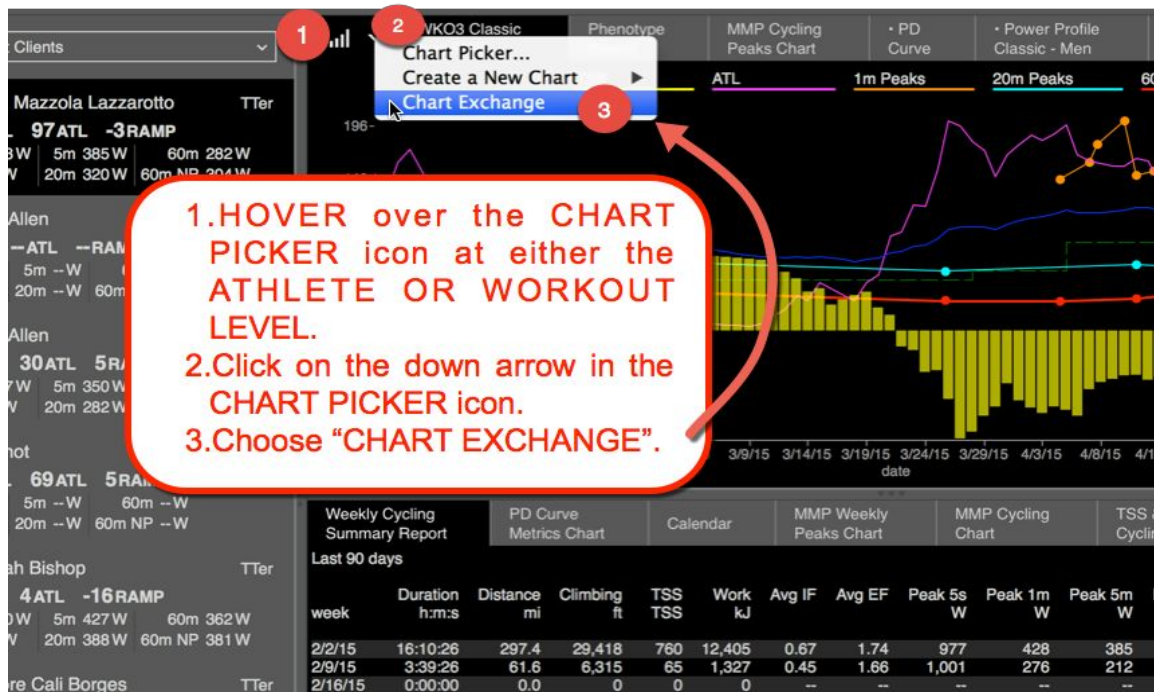
1. After you have clicked on the “+” button, the “Chart Picker” will open.
2. To Save this chart to the Pack, then be sure to click on the “Parent” chart Configure down arrow again and then choose “Save to Library”.

## Charts: How to access and use the CHART EXCHANGE

The chart exchange is a web-based location where you can find WKO4 charts to add to your library and also upload your own charts when you create a unique one. This is an excellent resource for all users of WKO4 and allows easy and convenient exchange of charts between users.

### How to access Chart Exchange:

1. HOVER over the CHART PICKER icon at either the ATHLETE OR WORKOUT LEVEL.
2. Click on the down arrow in the CHART PICKER icon.
3. Choose "CHART EXCHANGE".



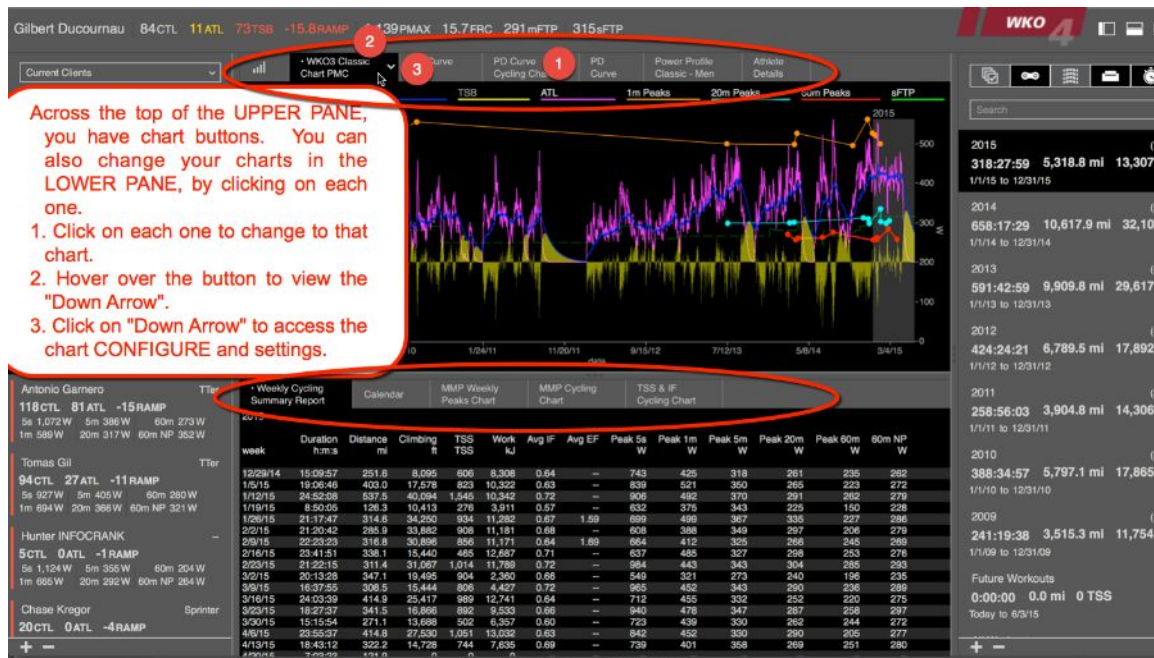
4. A web browser will launch and take you to the Chart exchange website.
5. On the Chart exchange site, you can easily search for charts by using keywords, categories, users, or date.
6. Once you have found the chart you would like, just double click on it and it will automatically install in your WKO4 software.
7. Note: IF you select an ATHLETE level chart and are at the WORKOUT level in WKO4, then WKO4 will change you to the ATHLETE level or vice versa.

## Main Chart settings for both ATHLETE and WORKOUT level

Inside each chart there are multiple settings in which allows you to display the data in different ways. These settings are the same for ATHLETE and WORKOUT levels.

### How to access a Chart settings inside each chart:

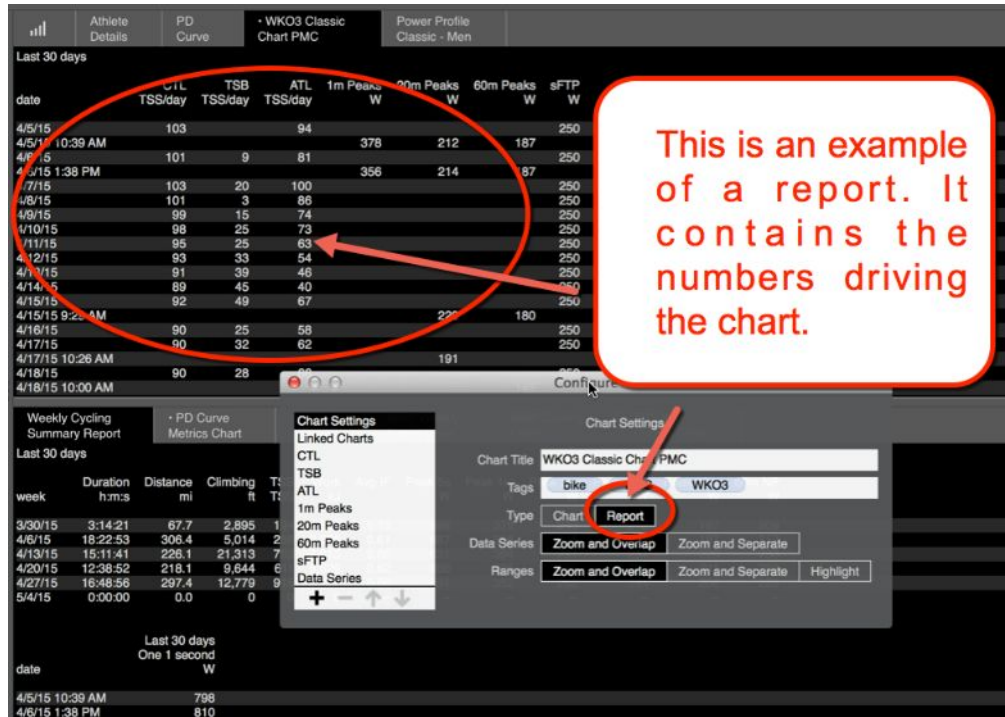
1. Across the top of the UPPER PANE, you have chart buttons. You can also change your charts in the LOWER PANE, by clicking on each one.
2. Click on each one to change to that chart.
3. Hover over the button to view the "Down Arrow".
4. Click on "Down Arrow" to access the chart CONFIGURE and settings.





**Basic Chart Settings and what they mean:**

1. TYPE: Chart means it will be a graphical display of the numbers. REPORT means it will display just the numbers that create the chart.



2. DATA SERIES: ZOOM and OVERLAP- This means that you want to put all the data on one chart, and plotting it on top of each other.



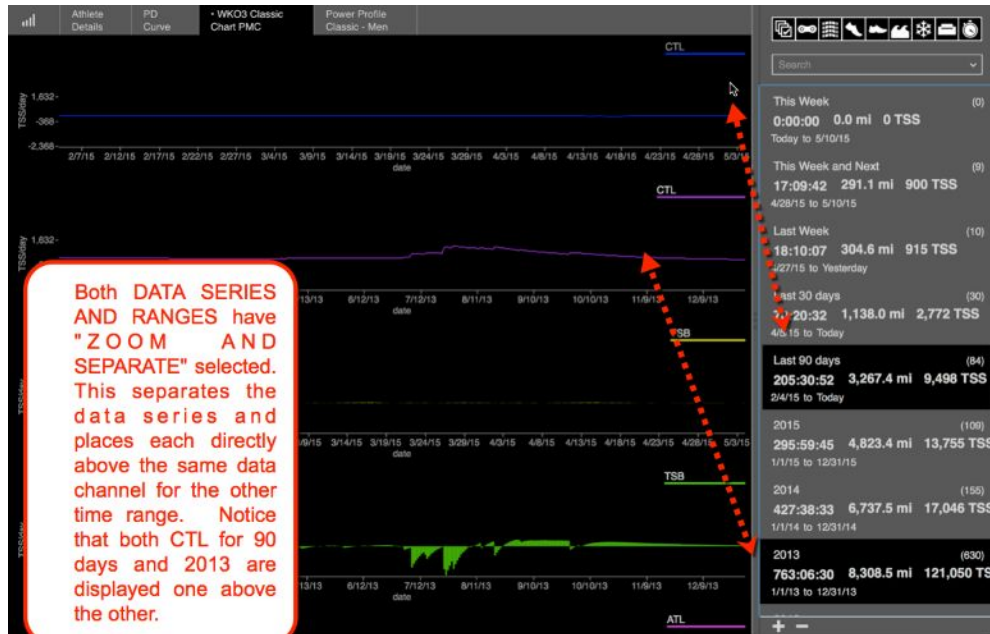
3. ZOOM AND SEPARATE- This means you want to SEPARATE the data into individual lanes.



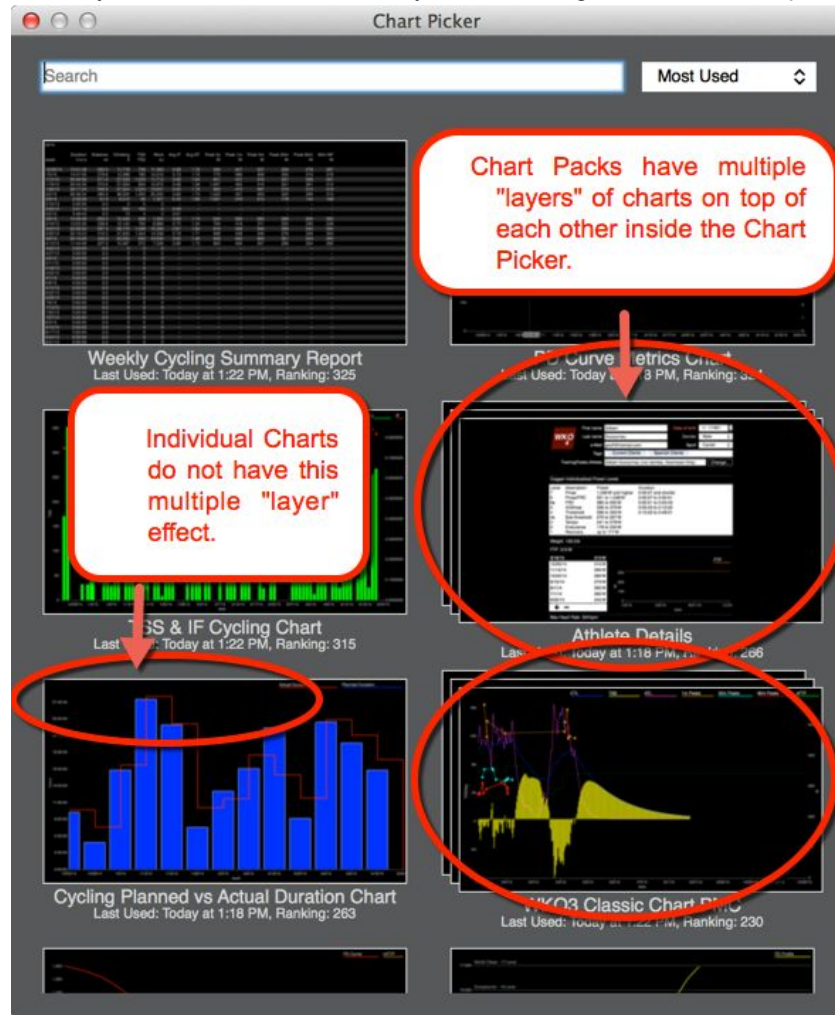
4. RANGES: ZOOM AND OVERLAP- This means that you want ZOOM in on any of the Time ranges you click on. If you COMMAND + "click".
  - a. This is no different than the ZOOM AND SEPARATE screenshot.
5. ZOOM AND SEPARATE – This will separate each of the different time periods into their own chart.
6. HIGHLIGHT- this will display all of the data in your history and "HIGHLIGHT" the background with a gray color when you click on that time range in the RHE.



7. BOTH settings: RANGES- ZOOM AND SEPARATE & DATA SERIES –ZOOM AND SEPARATE

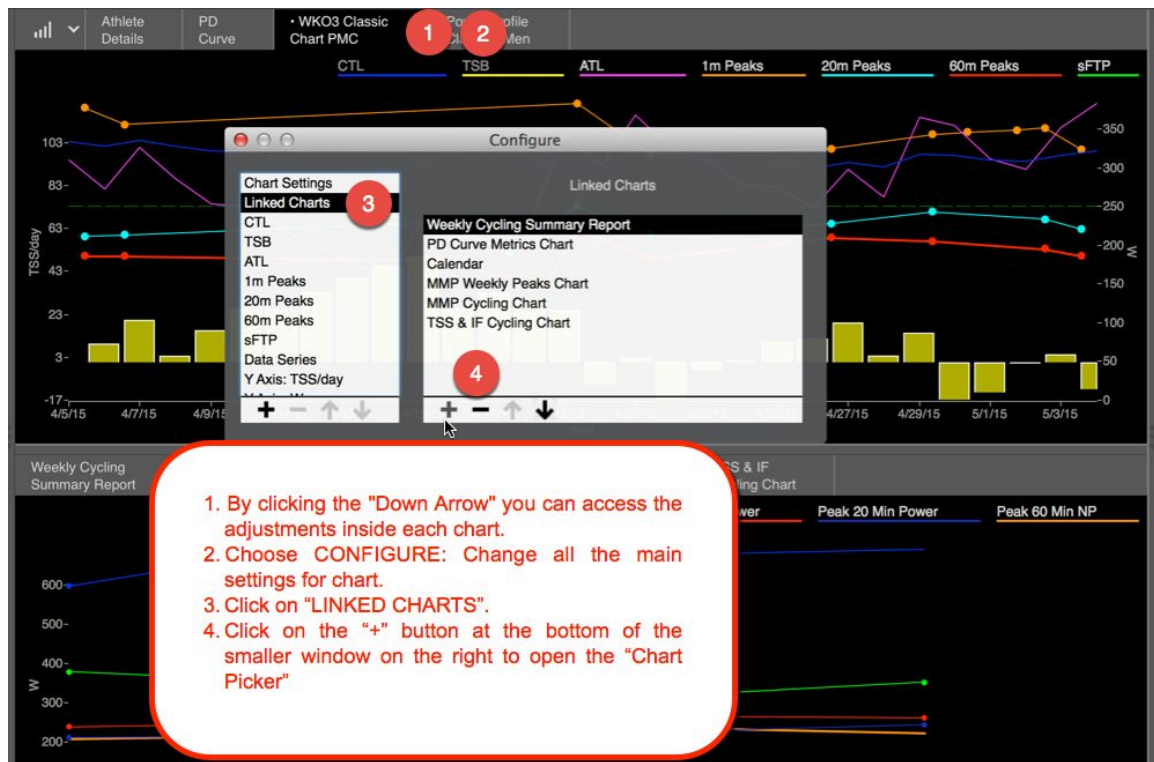


8. LAYOUT: Vertical- This will place charts on top of each other. Horizontal- This will place charts side by side. This is useful when you have Ranges “Zoom and Separate”.



### How to Link “Child” Charts to the “Parent” Chart:

1. By clicking the "Down Arrow" you can access the adjustments inside each chart.
2. Choose CONFIGURE: Change all the main settings for chart.
3. Click on “LINKED CHARTS”.
4. Click on the “+” button at the bottom of the smaller window on the right to open the “Chart Picker”



### Select a Chart to Link to the Parent and SAVE the new Pack:

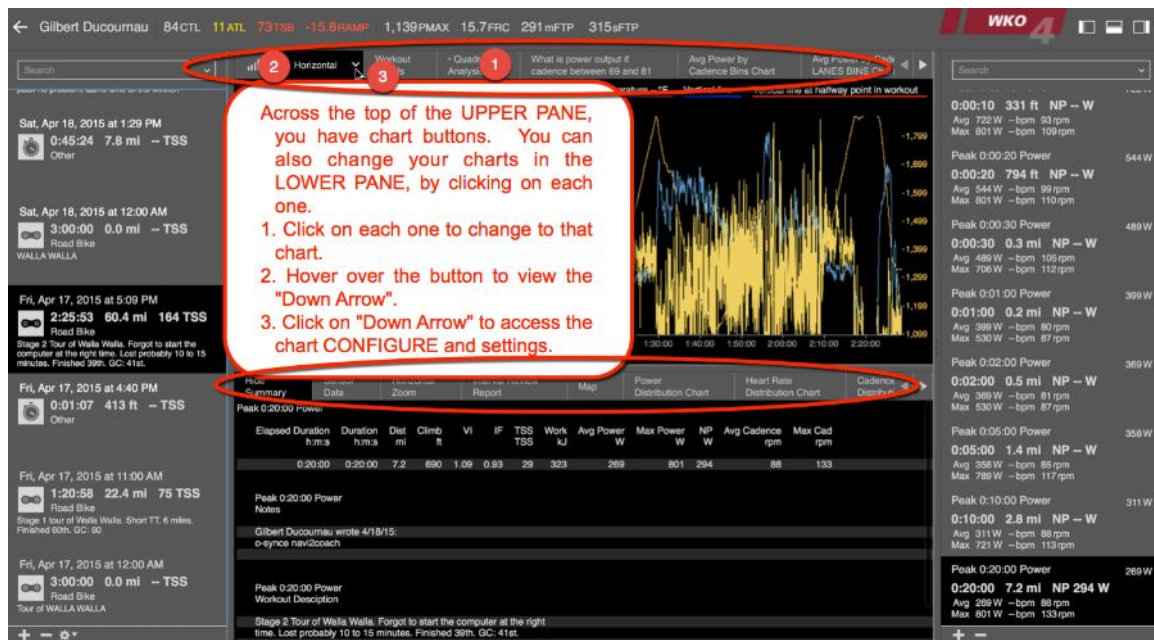
1. After you have clicked on the “+” button, the “Chart Picker” will open.
2. Double click on the chart you would like to link.
3. To Save this chart to the Pack, then be sure to click on the “Parent” chart Configure down arrow again and then choose “Save to Library”.

# Using Charts & Reports: Workout Level

## Charts: Basic Chart Navigation WORKOUT LEVEL

### Basic Chart navigation:

1. Across the top of the UPPER PANE, you have chart buttons. You can also change your charts in the LOWER PANE, by clicking on each one.
2. Click on each one to change to that chart.
3. Hover over the button to view the "Down Arrow".
4. Click on "Down Arrow" to access the chart CONFIGURE and settings.



## How to change the settings inside each the Chart:

1. By clicking the "Down Arrow" you can access the adjustments inside each chart.
2. CONFIGURE: Change all the main settings for chart.
3. EXPORT: Export this chart and send to a friend.
4. MAKE A COPY: Make a copy and then make some adjustments for a custom version.
5. COPY TO CLIPBOARD: Copy this chart to the clipboard and then paste into an email or document.
6. SAVE CHART TO LIBRARY: Save this chart to your "Chart Picker" library to use with other athletes or for future use. NOTE: The small "."(dot) beside the title words of the chart. This means that this chart has changes that have NOT been saved in the library of charts.

1. By clicking the "Down Arrow" you can access the adjustments inside each chart.

Change all of main settings for charts

Export the chart and send to a friend!

Make a copy and then make some adjustments for a custom version.

Copy the chart to the clipboard and then paste into an email or document.

Save this chart to your "Chart Picker" library to use with other athletes or for future use. 1. NOTE: The small "."(dot) beside the title words of the chart. That means the chart is not in the library in the current version.

By clicking the "Down Arrow" you can access the adjustments inside each chart.

WKO4

Gilbert Ducourneau 84CTL 11ATL 73TSB -15.8RAMP 1,139PMAX 15.7FRC 291mFTP 315m

Current Clients

Salvatore Cal Borges 48CTL 2ATL -15.8RAMP 1,139PMAX 15.7FRC 291mFTP 315m

Alvaro Castro 91CTL 74ATL -15.8RAMP 1,139PMAX 15.7FRC 291mFTP 315m

Gawie Combé 108CTL 103ATL -15.8RAMP 1,139PMAX 15.7FRC 291mFTP 315m

Gilbert Ducourneau 84CTL 11ATL -16RAMP 1,139PMAX 15.7FRC 291mFTP 315m

Antonio Gamero 118CTL 81ATL -15RAMP 1,139PMAX 15.7FRC 291mFTP 315m

Tomas Gil 94CTL 27ATL -11RAMP 1,139PMAX 15.7FRC 291mFTP 315m

2015 (173)  
318:27:59 5,318.8 mi 13,307 TSS  
1/1/15 to 12/31/15

2014 (500)  
658:17:29 10,617.9 mi 32,100 TSS  
1/1/14 to 12/31/14

2013 (451)  
591:42:59 9,909.8 mi 29,617 TSS  
1/1/13 to 12/31/13

2012 (410)  
424:24:21 6,789.5 mi 17,892 TSS  
1/1/12 to 12/31/12

2011 (312)  
258:56:03 3,904.8 mi 14,306 TSS  
1/1/11 to 12/31/11

2010 (371)  
388:34:57 5,797.1 mi 17,865 TSS  
1/1/10 to 12/31/10



## Chart Picker: Launching and Navigating at Workout level

The Chart Picker is where your library of charts is located. There are many charts inside your library, along with being able to locate new charts from the “Chart Exchange” website. When you build a new chart and save it to your library, WKO4 will take a small screen shot of the chart and place it in your chart picker for future use.

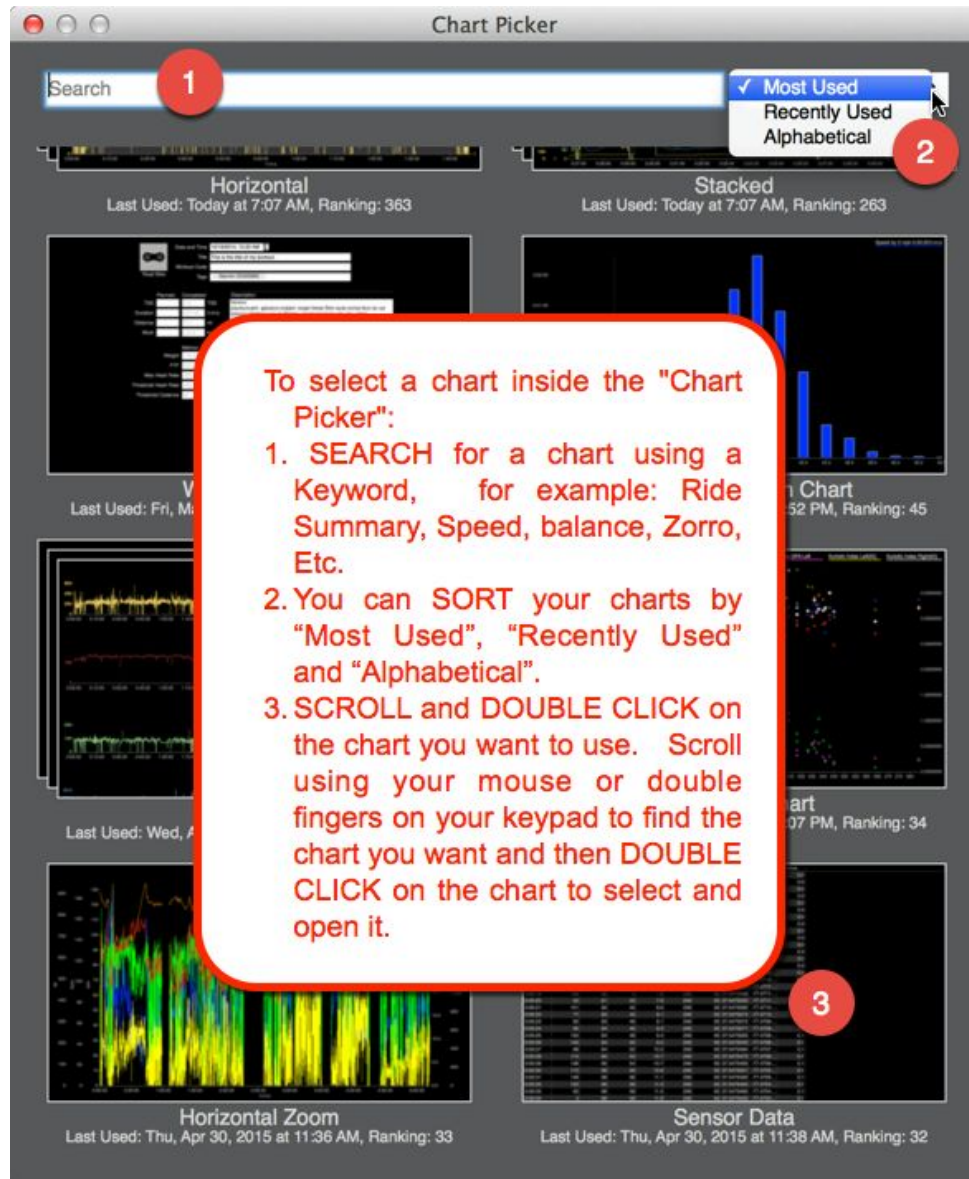
### To Open a new chart from the Chart Picker: from the WORKOUT LEVEL itself:

1. Click on the Athlete you want to view.
2. Double Click on that Athlete in order to access the WORKOUT LEVEL.
3. Click on the Workout you would like to view.
4. Double Click on the Chart Picker icon in either the upper pane. Or if you “hover” over the icon, you can single click on the down arrow that appears and then choose “Chart Picker”.



**From here you can:**

1. SEARCH for a chart using a Keyword, for example: Ride Summary, Speed, balance, Zorro, Etc.
2. You can SORT your charts by "Most Used", "Recently Used" and "Alphabetical".
3. SCROLL and DOUBLE CLICK on the chart you want to use. Scroll using your mouse or double fingers on your keypad to find the chart you want and then DOUBLE CLICK on the chart to select and open it.



# Building Charts and Using Expressions

## Building New Charts

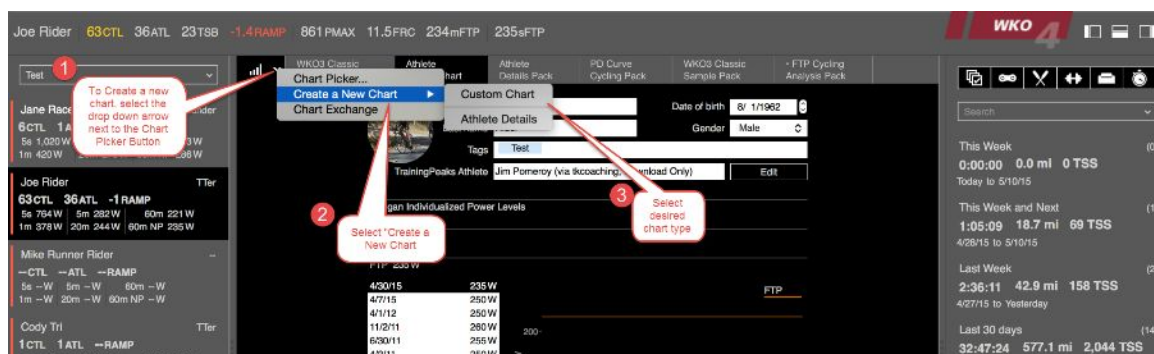
WKO4 is an advanced analytical engine allowing to chart/report any data. Follow the basic steps below to learn how.

### Introduction to WKO4 Charts and Reports:

1. Athlete and Workout Level charts need to be created separately as they report data differently
2. All data series can be seen as a chart (visual) or a report (data)
3. User can control the Data Series view
  - a. Zoom and Overlap: When selected this will zoom on selected series and when multiple data series are selected, will “overlap” them to show specific relationships of all data
  - b. Zoom and Separate: When selected this will zoom on selected series but when selected will separate the individual data series to show the specific relationship of EACH data series
4. User can control the Ranges (time) view
  - a. Zoom and Overlap: When selected this will zoom on selected series and when multiple data series are selected, will “overlap” them by TIME to show specific relationships of all data
  - b. Zoom and Separate: When selected this will zoom on selected series but when selected will separate the individual data series BY TIME to show the specific relationship of EACH data series
  - c. Highlight: When selected, this will NOT ZOOM and show any selected time range WITHIN the full data display

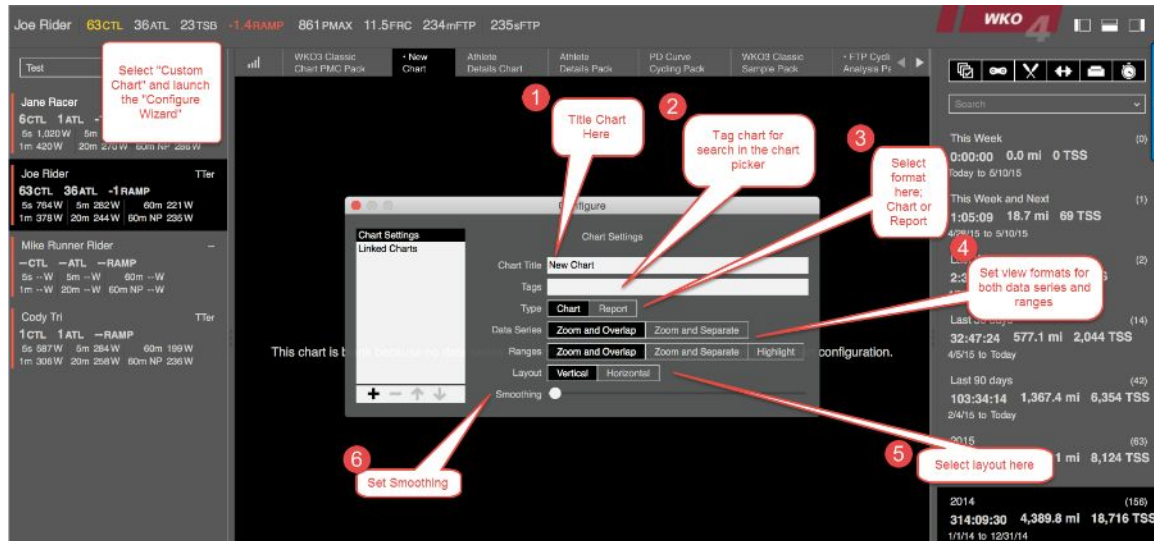
### How to access the New Chart wizard:

1. Open WKO4
2. Single Click on desired athlete or workout.
3. Click on the down arrow next to the chart picker icon to launch drop down options



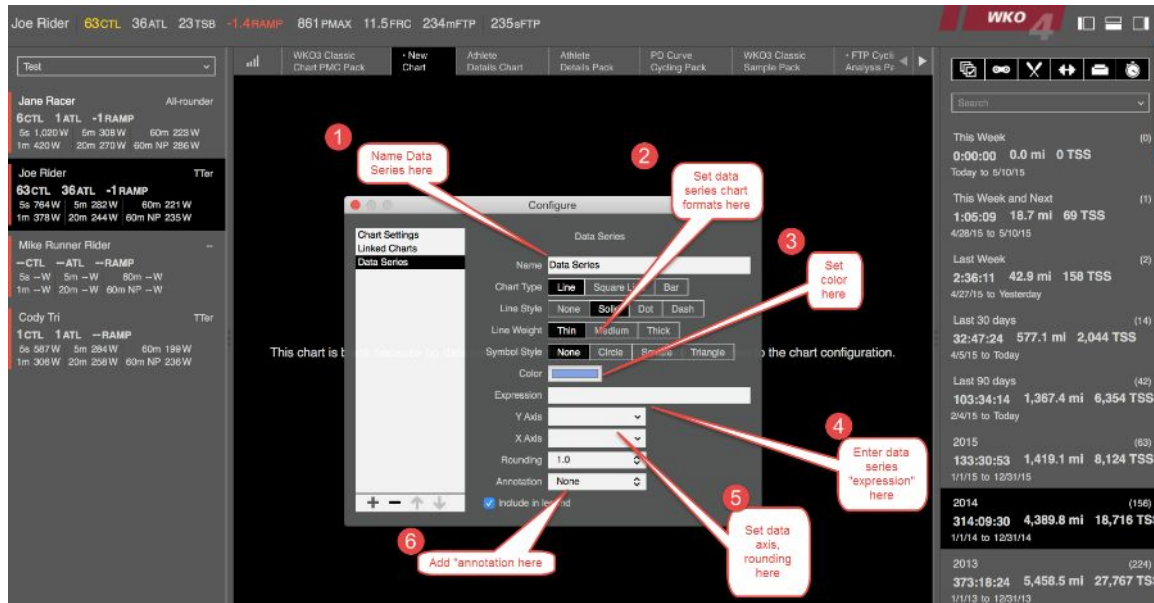
## Base setup in chart wizard:

1. First set up your chart or report basics as laid out below
2. In this step, you can set title, tags, select charts or reports, set data formats for data series and time ranges, select layouts and set smoothing



## Building Your Chart:

1. Click the + sign to add a new data series
2. Determine data series formats

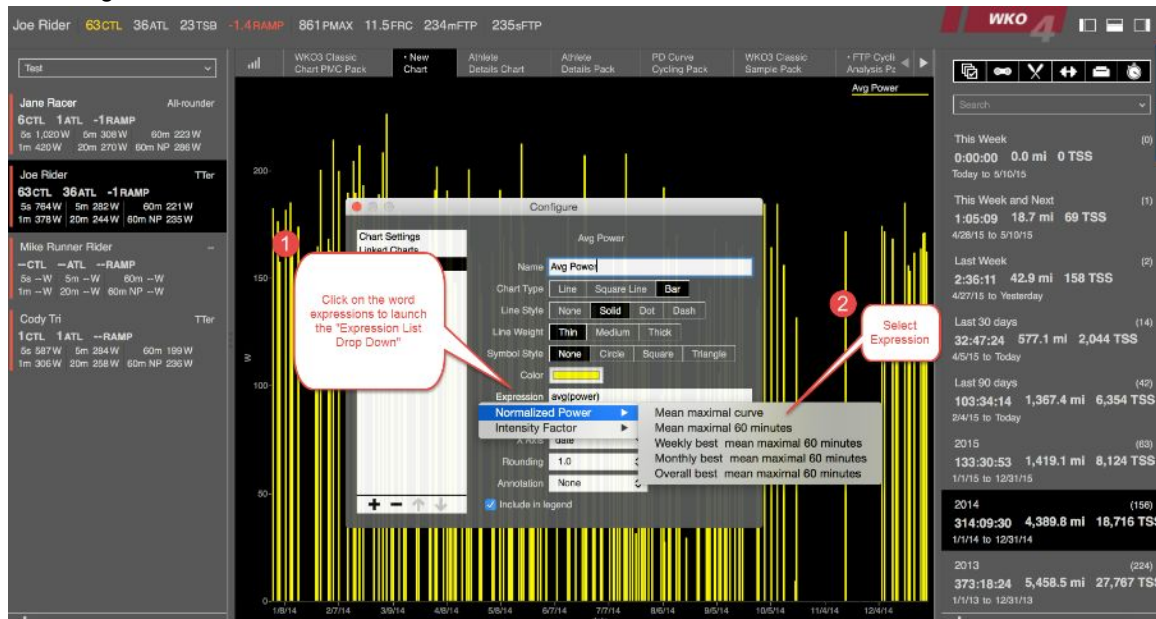




## Using Expressions:

Expressions are named data channels, algorithms or math that allows you to customize your charts

1. To access base expression, click on the “Expressions” term
2. Select desired expression
3. Advanced users can enter, edit and customize expressions using the supplied expressions guide



## Basic Expressions



| Expenditure  |                                  |       |          |   |         |   |
|--|----------------------------------|-------|----------|---|---------|---|
| <b>Variables for setting Athlete Information</b>               |                                  |       |          |   |         |   |
| Name   | Expression                       | Level | Standard | Description                             | Example | Output  |
| Functional Threshold Power                                     | fth                              | A     | W        | User entered Functional Threshold Power |         |   |
| Max Heart Rate   | maxhr                            | A     | bpm      | User entered Maximal Heart Rate         |         |   |
| Threshold Pace   | thp                              | A     | min/km   | User entered Threshold Pace             |         |   |
| Weight   | w                                | A     | kg       | User entered Weight in Kilograms        |         |   |
| <b>Functions to Track Training Metrics</b>                     |                                  |       |          |   |         |   |
| Name   | Expression                       | Level | Standard | Description                             | Example | Output  |
| Power  | power                            | A     | W        | Power                                   |         | Power in watts                                      |
| Mean Max Power Curve   | meanmaxpowercurve                | A     | W        | Power                                   |         | Power in watts                                      |
| Peak Power by Time   | peakpowerbytime                  | A     | W        | Power                                   |         | Power in watts                                      |
| Normalized Power   | normalizedpower                  | A     | W        | Power                                   |         | Power in watts                                      |
| Mean Max Normalized Power                                      | meanmaxnormalizedpower           | A     | W        | Power                                   |         | Power in watts                                      |
| Heart Rate   | heartrate                        | A     | bpm      | Heart rate                              |         | Heart rate in bpm                                   |
| Cadence  | cadence                          | A     | rpm      | Cadence                                 |         | Cadence in rpm                                      |
| Speed  | speed                            | A     | m/s      | Speed                                   |         | Speed in m/s  |
| Intensity Factor   | if                               | A     |          | Intensity factor                        |         | Intensity factor in general number, 1.0 is the base |
| Variable Index   | vi                               | A     |          | Variable index                          |         | Variable index in general number, 1.0 is the base   |
| Normalized Graded Pace   | normalizedgradedpace             | A     | min/km   | Normalized graded pace                  |         | Normalized pace in min/km                           |
| Standard Deviation   | stddev                           | A     |          | Standard deviation                      |         | Standard deviation in min/km                        |
| Duration   | duration                         | A     | min      | Duration                                |         | Duration in min                                     |
| Working Duration   | workingduration                  | A     | min      | Working duration                        |         | Working duration in min                             |
| Outside  | outside                          | A     | min      | Outside                                 |         | Outside in min                                      |
| Station  | station                          | A     | min      | Station                                 |         | Station in min                                      |
| Resolution Change  | resolutionchange                 | A     | min      | Resolution change                       |         | Resolution change in min                            |
| Centring   | centring                         | A     | min      | Centring                                |         | Centring in min                                     |
| Discontinuity  | discontinuity                    | A     | min      | Discontinuity                           |         | Discontinuity in min                                |
| Mean   | mean                             | A     | min      | Mean                                    |         | Mean in min   |
| Efficiency   | ef                               | A     |          | Efficiency                              |         | Efficiency in general number, 1.0 is the base       |
| Decoupling   | decoupling                       | A     |          | Decoupling                              |         | Decoupling in general number, 1.0 is the base       |
| <b>Functions that Track Summarized Metrics</b>                 |                                  |       |          |   |         |   |
| Name   | Expression                       | Level | Standard | Description                             | Example | Output  |
| Training Stress Score  | tss                              | A     | min      | Training stress score                   |         | Training stress score in min                        |
| Rest Training Stress Score                                     | rtss                             | A     | min      | Rest training stress score              |         | Rest training stress score in min                   |
| Heart Rate Training Stress Score                               | hrss                             | A     | min      | Heart rate training stress score        |         | Heart rate training stress score in min             |
| Training Load  | tl                               | A     | min      | Training load                           |         | Training load in min                                |
| CFL Constant   | cflconstant                      | A     | min      | CFL constant                            |         | CFL constant in min                                 |
| ATL Constant   | atlconstant                      | A     | min      | ATL constant                            |         | ATL constant in min                                 |
| Training Stress Balance  | tssb                             | A     | min      | Training stress balance                 |         | Training stress balance in min                      |
| Time in Training Level   | timeinttraininglevel             | A     | min      | Time in training level                  |         | Time in training level in min                       |
| <b>Calculations to Create Specific Metrics</b>                 |                                  |       |          |   |         |   |
| Name   | Expression                       | Level | Standard | Description                             | Example | Output  |
| Maximum  | max                              | A     | min      | Maximum                                 |         | Maximum in min                                      |
| Minimum  | min                              | A     | min      | Minimum                                 |         | Minimum in min                                      |
| Max Rate   | maxrate                          | A     | min      | Max rate                                |         | Max rate in min                                     |
| <b>Calculations to Apply to Metrics</b>                        |                                  |       |          |   |         |   |
| Name   | Expression                       | Level | Standard | Description                             | Example | Output  |
| Max  | max                              | A     | min      | Max                                     |         | Max in min  |
| Sum  | sum                              | A     | min      | Sum                                     |         | Sum in min  |
| Min  | min                              | A     | min      | Min                                     |         | Min in min  |
| Group Data Points  | groupdatapoints                  | A     | min      | Group data points                       |         | Group data points in min                            |
| <b>Functions that Set Metrics Calculations</b>                 |                                  |       |          |   |         |   |
| Name   | Expression                       | Level | Standard | Description                             | Example | Output  |
| Gradient   | gradient                         | A     | min      | Gradient                                |         | Gradient in min                                     |
| Rate   | rate                             | A     | min      | Rate                                    |         | Rate in min   |
| Sort Ascending   | sortascending                    | A     | min      | Sort ascending                          |         | Sort ascending in min                               |
| Sort Descending  | sortdescending                   | A     | min      | Sort descending                         |         | Sort descending in min                              |
| <b>Functions that Go up Metrics by Time Ranges</b>             |                                  |       |          |   |         |   |
| Name   | Expression                       | Level | Standard | Description                             | Example | Output  |
| Year   | year                             | A     | min      | Year                                    |         | Year in min   |
| Months   | months                           | A     | min      | Months                                  |         | Months in min                                       |
| Weeks  | weeks                            | A     | min      | Weeks                                   |         | Weeks in min  |
| Day  | day                              | A     | min      | Day                                     |         | Day in min  |
| <b>Functions that use a Power Duration Model &amp; Metrics</b> |                                  |       |          |   |         |   |
| Name   | Expression                       | Level | Standard | Description                             | Example | Output  |
| Power Duration Curve (W/kg)                                    | powerdurationcurve               | A     | W/kg     | Power duration curve                    |         | Power duration curve in W/kg                        |
| Power Duration Curve (Watts)                                   | powerdurationcurve               | A     | W        | Power duration curve                    |         | Power duration curve in Watts                       |
| Modelled Functional Threshold Power                            | modelledfunctionalthresholdpower | A     | W        | Modelled functional threshold power     |         | Modelled functional threshold power in Watts        |
| Power  | power                            | A     | W        | Power                                   |         | Power in Watts                                      |
| Functional Reserve Capacity                                    | functionalreservecapacity        | A     | W        | Functional reserve capacity             |         | Functional reserve capacity in Watts                |

# Sharing and Exchanging Charts



## Exporting Charts and Chart Packs

WKO4 is an advanced analytical engine allowing to chart/report any data. Once charts are created, they can be exported and exchanged with any other WKO4 user. Follow the basic steps below to learn how.

### Exporting Charts:

1. Athlete and workout level charts can be exported following the same process
2. Click the down arrow located to the right of the chart name to launch the config drop down
3. Select "Export" option to launch Export Wizard



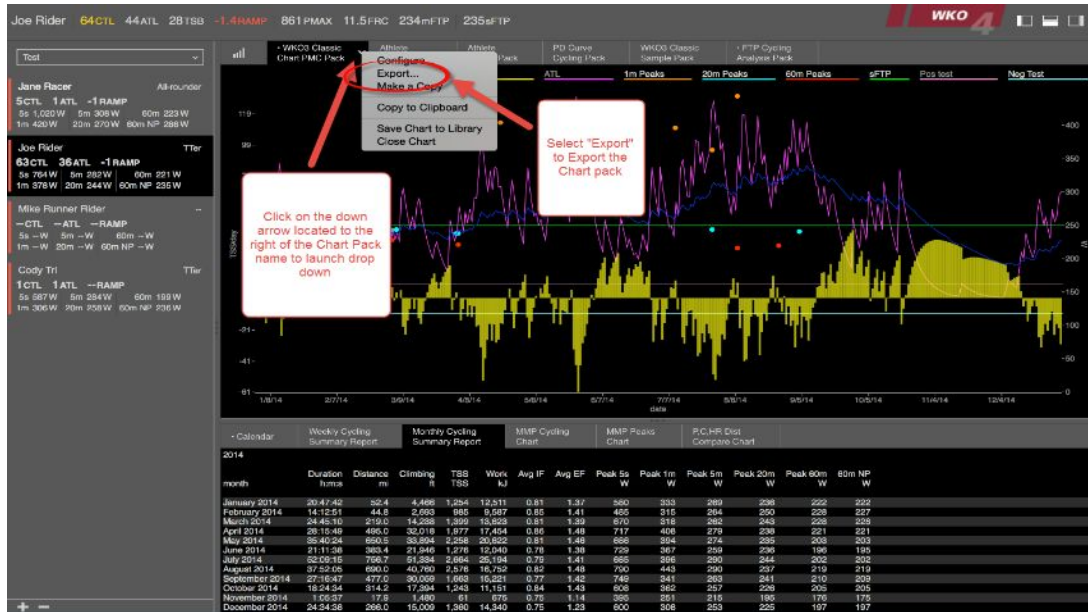
4. Review export options and target locations, click Export to export the file.



### Exporting Chart Packs:

1. Athlete and workout level CHART PACKS can be exported following the same process
2. Click the down arrow located to the right of the chart name to launch the config drop down.
3. Select "Export" option to launch Export Wizard

# WKO4 User Guide



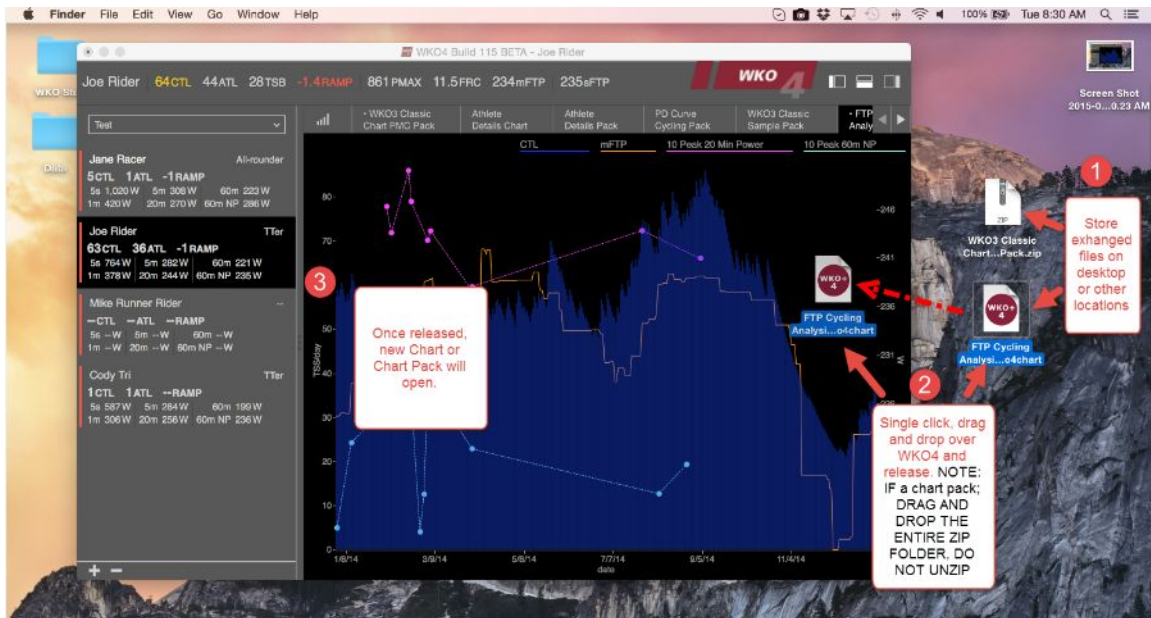
4. Review export options and target locations, click Export to export the zip file.

## Importing Charts and Chart Packs

WKO4 is an advanced analytical engine allowing to chart/report any data. Once charts are created, they can be exported and exchanged with any other WKO4 user. Follow the basic steps below to learn how.

### Importing Charts & Chart Packs:

1. Store “exchanged files or zip folder in easily accessed location
2. Drag and drop selected file / folder over WKO4 and release
3. Chart or Chart pack will open and display



4. If you already have the chart or chart pack, a pop up box will warn you and give options to proceed



# How-To Guides

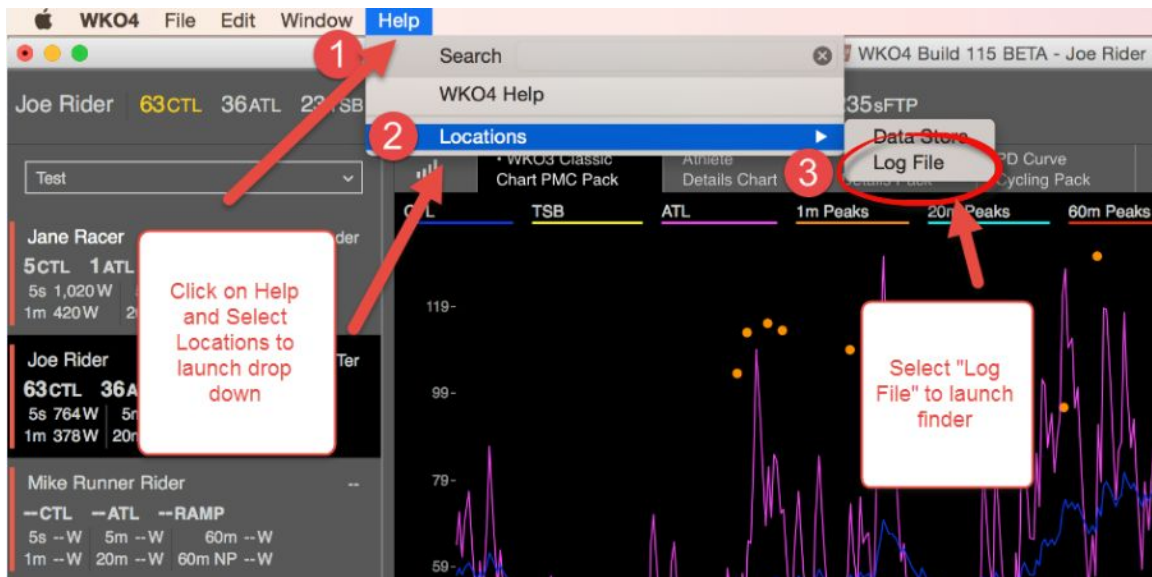


## Find, Compress, and Export Your Log

Reviewing syncing information and/or troubleshooting issues may require you to access and export your log.

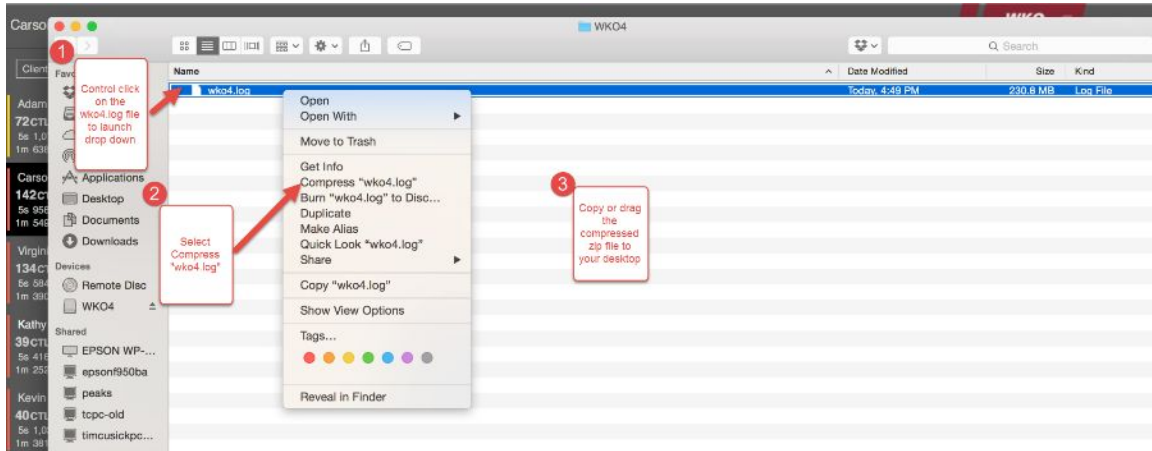
### To Access your Log File: First Open WKO4

1. Click on Help in the Mac Top bar
2. Select Locations to launch drop down
3. Click on Log File to launch finder and view log



### To Compress and Save log:

1. Control Click on “wko4.log” file
2. Select Compress “wko4.log”
3. Copy and paste or drag and drop resulting compressed zip folder to desktop or email



## How to Fix Bad Data

### How to find the suspected bad data

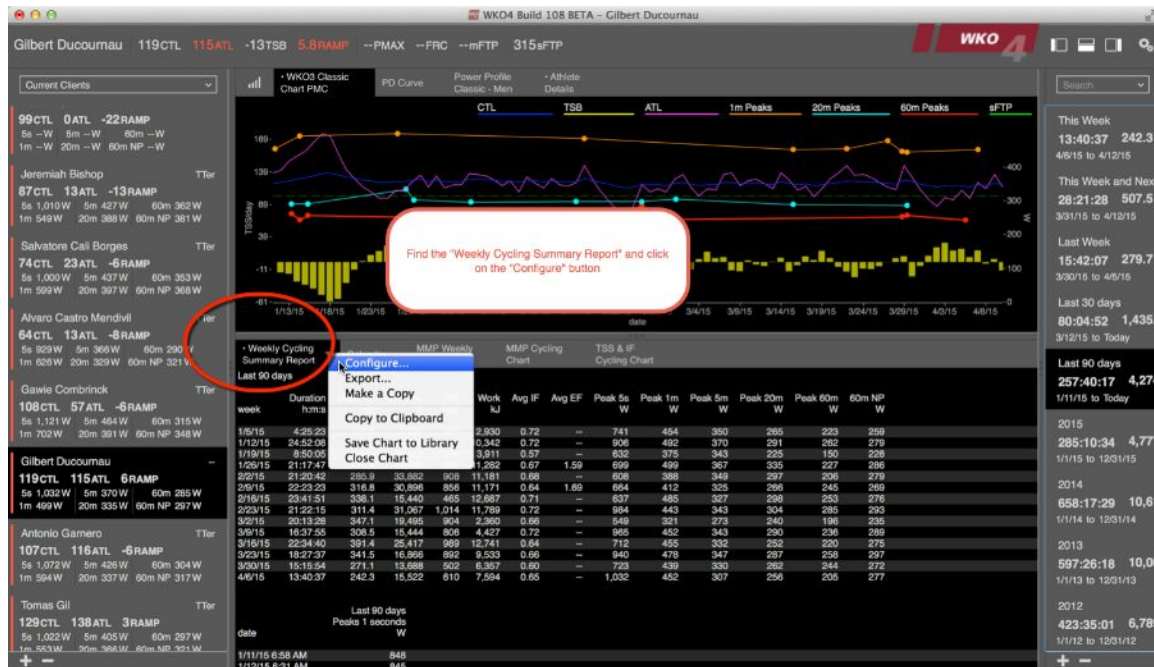
1. Review the Mean Maximum Power Curve or Power Duration (PD) Curve to see if there are very high wattages.
2. IF your “phenotype” does not show up in the Athlete list.
3. If your FTP is not calculated and only dashes are displayed.



Once you have determined you have bad data, you must pinpoint its location to the exact ride(s) it might have happened during:

1. Open your Weekly Cycling Summary report. This should be one of the reports in the lower window pane of the WKO+ 3.0 PMC Classic Pack of charts.
2. Click on the “Down arrow” to Configure the Report.

## WKO4 User Guide

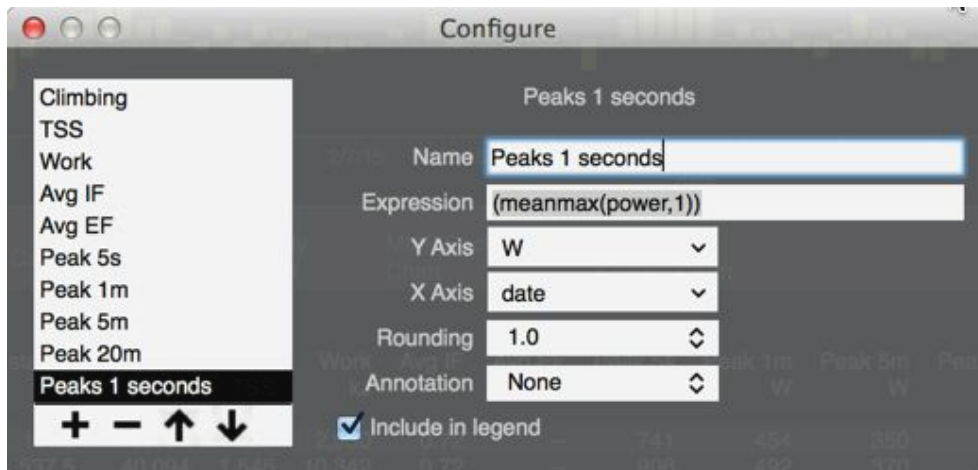


Add in a new DATA Series to help pinpoint the file with the bad data:



**Chart PEAK 1 second power by Day:**

1. Under “Name” type Peak 1 second Power by Day”
2. In the Expression, copy and paste this expression → (meanmax(power,1))
3. The Y-Axis should be “W” for watts
4. The X-Axis should be “Date”

**Find your Bad data:**

1. Now, you should have a column of data below the other metrics that list the date and then the Peak 1 second power beside it.
2. Scroll down through the date ranges and find any dates that have very high wattages.
3. Write down these dates, so you will be able to remember them when you are moving through the workouts to find the data.

|      | Weekly Cycling Summary Report | Calendar | MMP Weekly Peaks Chart | MMP Cycling Chart |
|------|-------------------------------|----------|------------------------|-------------------|
|      | 3/17/15 12:00 AM              | 449      |                        |                   |
|      | 3/18/15 4:31 PM               | 618      |                        |                   |
| TTer | 3/19/15 12:00 AM              | 377      |                        |                   |
|      | 3/20/15 12:00 AM              | 696      |                        |                   |
|      | 3/21/15 12:00 AM              | 462      |                        |                   |
| 5 W  | 3/22/15 12:00 AM              | 716      |                        |                   |
| 3 W  | 3/24/15 12:00 AM              | 730      |                        |                   |
|      | 3/25/15 12:00 AM              | 1,076    |                        |                   |
| --   | 3/26/15 12:00 AM              | 419      |                        |                   |
|      | 3/27/15 12:00 AM              | 983      |                        |                   |
|      | 3/28/15 9:17 AM               | 247      |                        |                   |
| 5 W  | 3/28/15 5:51 PM               | 940      |                        |                   |
| 7 W  | 3/29/15 8:31 AM               | 744      |                        |                   |
|      | 3/30/15 12:00 AM              | 377      |                        |                   |
|      | 4/2/15 12:00 AM               | 578      |                        |                   |
| TTer | 4/2/15 2:58 PM                | 322      |                        |                   |
|      | 4/3/15 12:00 AM               | 615      |                        |                   |
| 4 W  | 4/4/15 12:00 AM               | 525      |                        |                   |
| 7 W  | 4/5/15 11:41 AM               | 827      |                        |                   |
|      | 4/6/15 12:00 AM               | 401      |                        |                   |
|      | 4/7/15 12:00 AM               | 873      |                        |                   |
| TTer | 4/8/15 12:00 AM               | 783      |                        |                   |
|      | 4/8/15 5:11 PM                | 533      |                        |                   |
| 7 W  | 4/9/15 12:00 AM               | 4,001    |                        |                   |
| 1 W  |                               |          |                        |                   |

Your new column of data is here. And the Bad Data file is usually obvious.





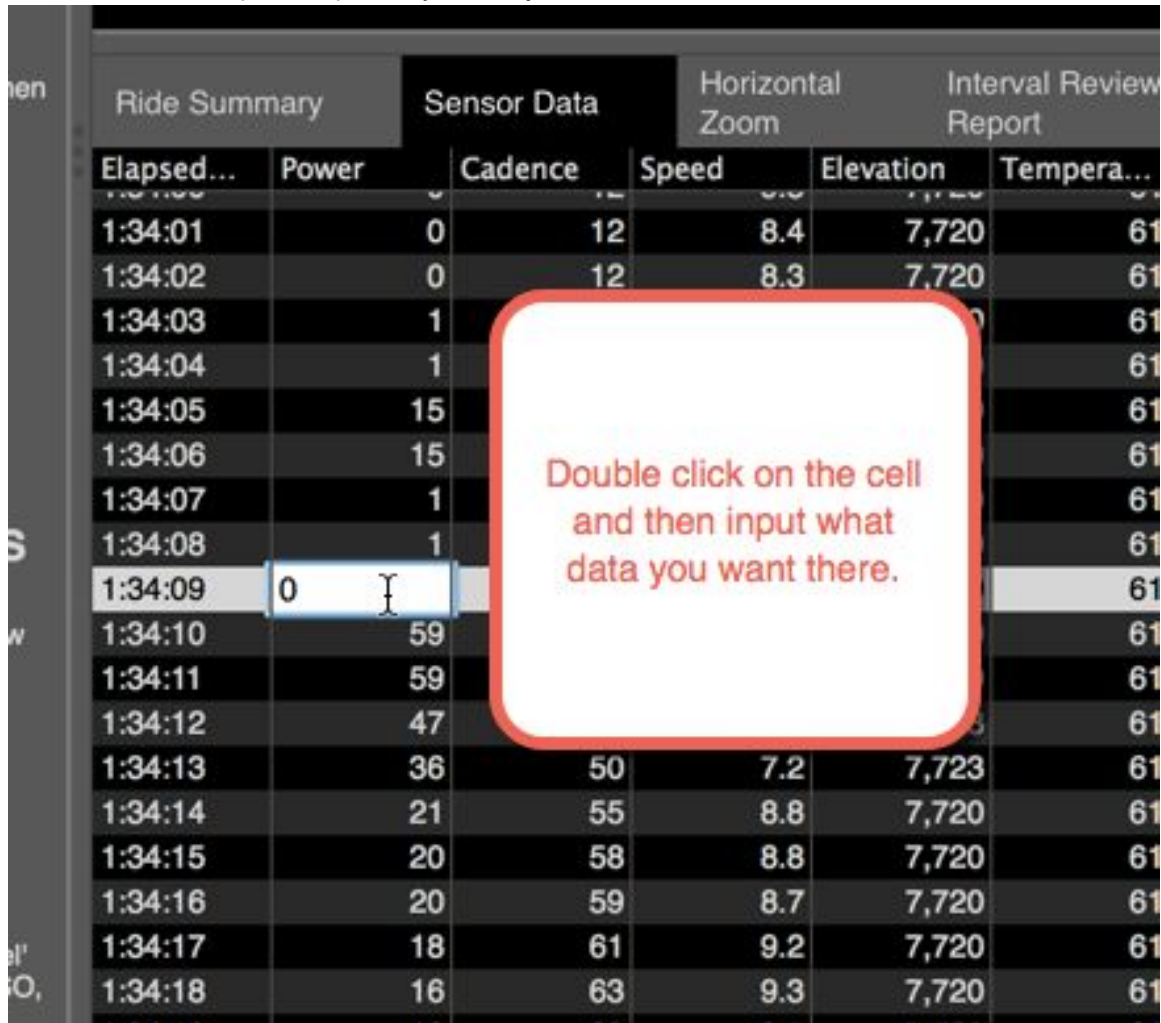
## LOCATE FILE AND EXACT BAD DATA POINT:

1. Double Click on Your name in the Left Hand Explorer(LHE)Select desired Time Range by Single Clicking to open the WORKOUT LEVEL
2. Scroll to the data of the bad data
3. Click on the Date and open the “Horizontal” graph. Put the “SENSOR DATA” report in the bottom pane.
4. Look for the large SPIKE in Power in the file> should be obvious tall yellow spike.
5. Click on the large Spike in the Upper “Horizontal” pane.
6. This will help you pinpoint it in the “SENSOR DATA” Report below.



**CORRECT BAD DATA POINT**

1. To Correct the bad data point, simply “DOUBLE CLICK” directly on the bad data CELL and then put in whichever data you want to insert here.
2. In this example, it is probably best to just add in a “Zero”.



| Elapsed... | Power | Cadence | Speed | Elevation | Tempera... |
|------------|-------|---------|-------|-----------|------------|
| 1:34:01    | 0     | 12      | 8.4   | 7,720     | 61         |
| 1:34:02    | 0     | 12      | 8.3   | 7,720     | 61         |
| 1:34:03    | 1     |         |       |           | 61         |
| 1:34:04    | 1     |         |       |           | 61         |
| 1:34:05    | 15    |         |       |           | 61         |
| 1:34:06    | 15    |         |       |           | 61         |
| 1:34:07    | 1     |         |       |           | 61         |
| 1:34:08    | 1     |         |       |           | 61         |
| 1:34:09    | 0     |         |       |           | 61         |
| 1:34:10    | 59    |         |       |           | 61         |
| 1:34:11    | 59    |         |       |           | 61         |
| 1:34:12    | 47    |         |       |           | 61         |
| 1:34:13    | 36    | 50      | 7.2   | 7,723     | 61         |
| 1:34:14    | 21    | 55      | 8.8   | 7,720     | 61         |
| 1:34:15    | 20    | 58      | 8.8   | 7,720     | 61         |
| 1:34:16    | 20    | 59      | 8.7   | 7,720     | 61         |
| 1:34:17    | 18    | 61      | 9.2   | 7,720     | 61         |
| 1:34:18    | 16    | 63      | 9.3   | 7,720     | 61         |

3. Now, repeat the above steps for any remaining data points you might have.

### Check to see if you have cleared all the bad data

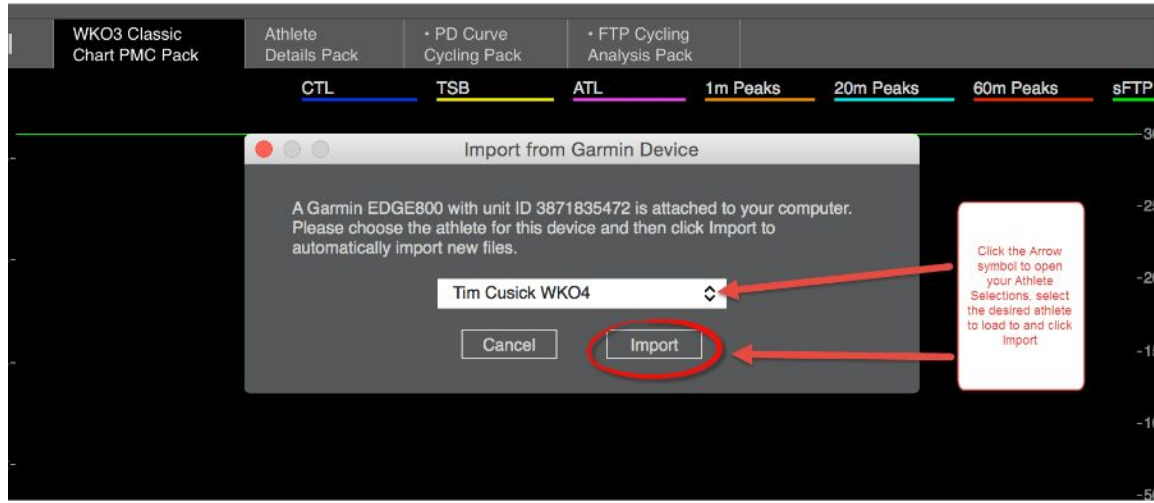
1. Click the “LEFT ARROW” in the top of the screen (left hand corner beside your name) to navigate back to the ATHLETE LEVEL.
2. If everything is fixed and you don't have any more bad data points then review your PD/MMP Curve and you should also have a “Phenotype” and “PMAx and FRC “ now as well.



## How to Load Data from Device

### Loading from Garmin Devices:

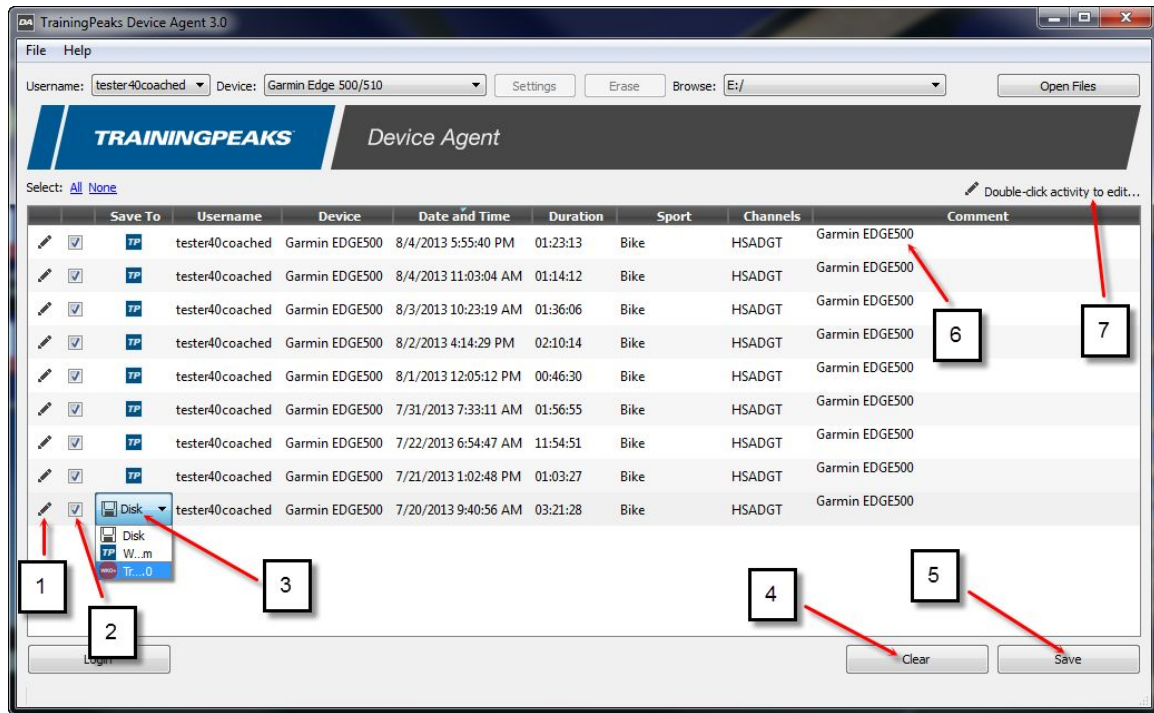
1. Using Garmin approved USB cord, plug device into computer
2. Download wizard will appear in a few seconds
3. Select athlete to Import to
4. Click Import to begin



### Download from other Devices using Device Agent:

1. Install the software that came with your device, as this is what contains the drivers (small packets of software that allow your computer to "talk" to your device). Do not run the manufacturers software when trying to download from your Device to WKO+, but it does need to be installed on the same computer as WKO+
2. Close all other training related software
3. Open Device Agent
4. Connect the download cable or wireless dongle to your computer
5. Select the correct Training Device Type and Training Device Port (the correct port will have text mentioning "USB", "Serial", or both, in parenthesis off to the right of the com number; or it will default to the correct one that cannot be changed) at the top of the Device Agent
6. Connect your device and turn it on
7. Click "Download from Device" (or "Open Files") in the upper right hand corner
8. Once the files have been extracted from the device, they will be listed by date in the Download Window. Select the location you wish to send the downloaded files to by clicking on the icon within the Save To column. Once you have selected the desired Save To destination, click the Save button in the lower right hand corner

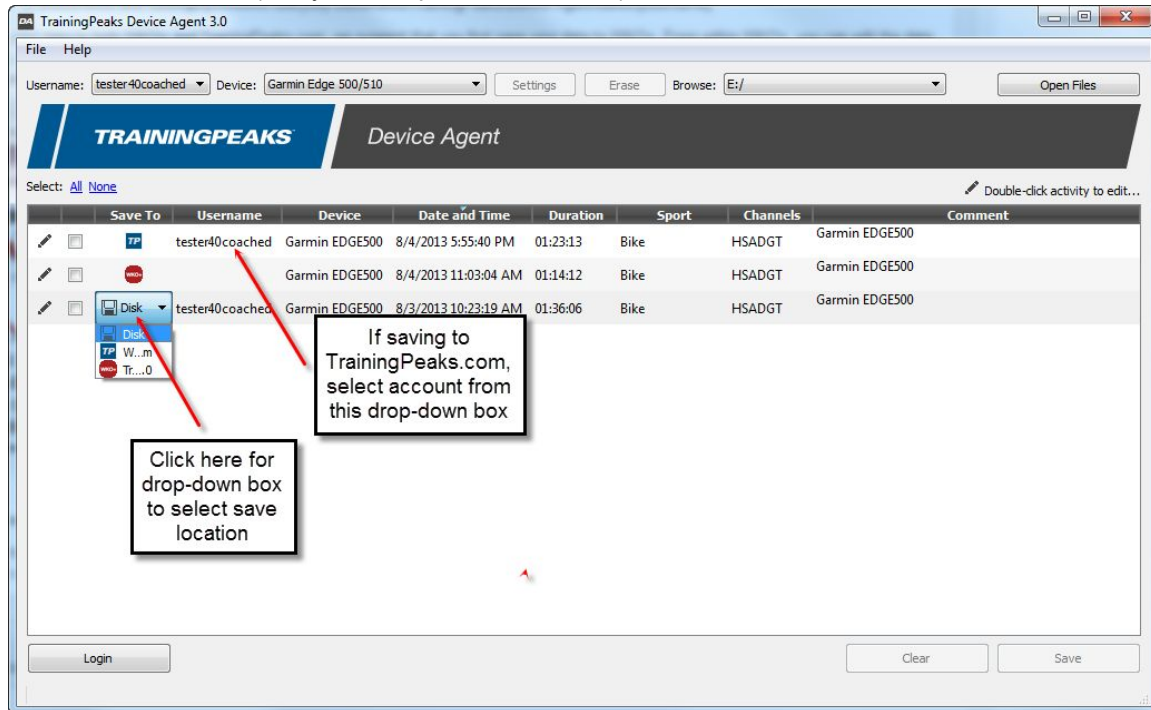
Once you have downloaded the data, you will get something similar to the picture below:



1. Pencil Icon: this indicates that you can edit information for that specific workout.
2. Check Box: check the box for the workouts you want included when you save the data. Un-check it if you want to leave that workout alone and not send it when you click "Save".
3. Save to: There are three places you can save workouts to, TrainingPeaks.com, WKO+, and to a file. Click on the icon to change the selection. In this example, all workouts will be saved to TrainingPeaks. You can have different workouts saved to different places. For example, you can send the first workout to TrainingPeaks.com, the second one to WKO+, or save one of them to file.
4. Clear: will clear the list of workouts.
5. Save: will save your workouts to where ever you choose (see #3 above).
6. Comment: double-click on this column to add a comment to that workout
7. "Double-click activity to edit": Some workouts can be changed, just double click on the information to make changes. For example, if the 2nd workout should be added to a different date, just double-click on the date field and you will be able to change the date.
8. Once you have everything as you want, click "Save" and the workouts will be saved. If you are saving to TrainingPeaks.com, a "username" will show up after you change the "save to" to TrainingPeaks.com. You can select which userID you want to save the workout to.

**Saving Workouts to Different Locations:**

- You can send device data files to the following places from Device Agent v3.0:
  - o TrainingPeaks.com online account
  - o WKO+ 3.0 or WKO4
  - o Disk (i.e., your computer's hard drive)



- After you download from your training device, there will be a column called "Save to". Click on the icon for each workout and you will have an option to select where the file should go. You set the default location (file...options...save to...), but locations can be changed per workout.
- Please note, regardless of what your default "save to" setting is, if you open the Device Agent from WKO+, all your files will default to be saved to WKO+. You can still manually change the "save to" location as mentioned above.
- Device Agent v3.0 always will "save to disk" despite your "save to" settings, the files are stored in the following file path locations, depending on what version of Windows you are using.



**Adding a Workout File to Device Agent:**

You can add a file to the Device Agent, and then either upload it to TrainingPeaks or into WKO+. This works the same way as saving with a workout that came from a Device. The only difference is how you get it into Device Agent.

1. Open the Device Agent. Make the window small on your screen.
2. Open a Window Explorer window.
3. Go to the folder where you have the file you want to add located.
4. Make that Window Explorer small, so that you can see both windows on your screen at the same time.
5. Drag-and-drop the file from the folder location onto the Device Agent.
6. Now you have the file added and can be saved to WKO+ or TrainingPeaks.com at this point.

## How to adjust your functional threshold power (FTP)

Managing your FTP is critical to making sure your Training Stress Score is correct for each workout, along with also determining the correct training zones for your workouts. Anytime that your FTP moves up or down, you should change this setting inside your ATHLETE DETAILS page, under the FTP setting.

### To access your FTP settings:

1. Open WKO4
2. Click on the Athlete you want to manage.
3. Click on the ATHLETE DETAILS button at the top of the upper pane.
4. Select the athlete you want in the LHE.
5. Click on the "Athlete Details" button at top of upper pane.
6. Hover over the words "FTP".
7. Click "SHOW".

Scott Tucker 77CTL 72ATL -6TSB 0.0RAMP 555PMAx 10.1FRC 271mFTP 270sFTP

Current Clients

WKO4 Classic Chart PMC Pack • Power Profile Classic - Men PD Curve Pack • Athlete Details **2**

First name Scott Date of birth 5/ 9/1960  
Last name Tucker Gender Male  
Tags Current Clients  
TrainingPeaks Athlete Scott Tucker (via rexbmb, Download Only) Edit

Coggan Individualized Power Levels

Weight 153.0 lb

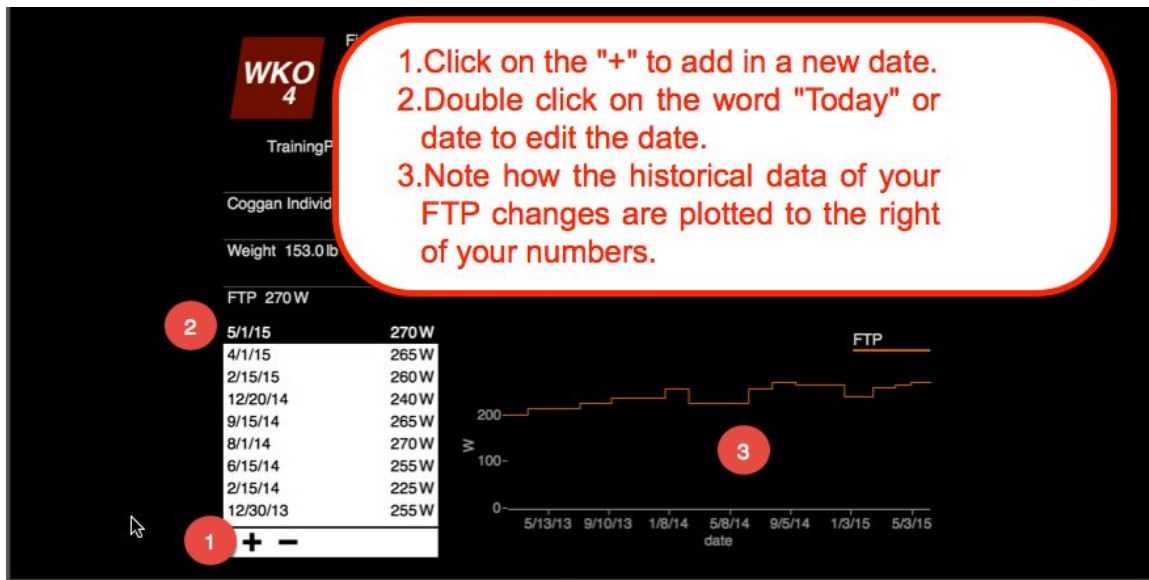
**3** FTP 270 W **4**

| Date     | FTP   |
|----------|-------|
| 5/1/15   | 270 W |
| 4/1/15   | 265 W |
| 2/15/15  | 260 W |
| 12/20/14 | 240 W |
| 9/15/14  | 265 W |
| 8/1/14   | 270 W |
| 6/15/14  | 255 W |
| 2/15/14  | 225 W |
| 12/30/13 | 255 W |

Graph showing FTP over time (date) from 5/13/13 to 5/3/15. The line shows a step-wise increase in power over time.

Scott Tucker **1** TTer  
77CTL 72ATL 0RAM  
5s 529 W 5m 320 W 60m 237 W  
1m 392 W 20m 262 W 60m NP 273 W  
Miguel Ubeto TTer

8. When you want to change your FTP, then simply push the "+" button and it will add in a new date at the top, called "TODAY".
9. Double Click on the word "Today" and then edit the date however you want.



10. When you have multiple time periods in your FTP history, the data from that specific date to the next date will associate all the data in your ride history with that FTP.
11. For Example, from 2-15-2015 to 3-31-2015, all data has a FTP of 260W associated with it. From 4-1-2015 to 4-30-2015 has all data associated as 265W. And then from 5-1-2015 FORWARD, all data will be associated with 270W.

